Volume 89 Issue 4 ISSN 0161-956X 2014

Peabody Journal of Education

Issues of Leadership, Policy, and Organizations

Marygrove College Library
8425 West McNichols Road
Detroit, MI 48221

Published in cooperation with the Peabody College of Vanderbilt University

Routledge
Taylor & Francis Group

PEABODY JOURNAL OF EDUCATION

Issues of Leadership, Policy, and Organizations

Camilla P. Benbow, Dean, Peabody College
Robert Crowson, Editor
Michele Thompson, Coordinating Editor
Preston Magouirk, Associate Editor

EDITORIAL ADVISORY BOARD

Dale Ballou, *Vanderbilt University*
Mary M. Brabeck, *New York University*
Mark Bray, *The University of Hong Kong*
Hongqi Chu, *Beijing Normal University*
Lora Cohen-Vogel, *University of North Carolina-Chapel Hill*
Mary E. Driscoll, *City University of New York*
Joseph P. DuCette, *Temple University*
Michael J. Feuer, *George Washington University*
Louis M. Gomez, *University of Pittsburgh*
Gerardo M. Gonzalez, *Indiana University*
David W. Gordon, *Sacramento (CA) County Office of Education*
Eric A. Hanushek, *Stanford University*
Stephen P. Heyneman, *Vanderbilt University*
Susan Moore Johnson, *Harvard University*
James H. Lytle, *University of Pennsylvania*
Ann L. Marcus, *New York University*
Michael McLendon, *Southern Methodist University*
Bill McKinney, *Region IV Education Service Center*
Jerome Morris, *University of Georgia*
Penelope L. Peterson, *Northwestern University*
Michael J. Podgursky, *University of Missouri-Columbia*
William Schmidt, *Michigan State University*
Jung Cheol Shin, *Seoul National University*
Robert Slavin, *Johns Hopkins University*
Deborah Lowe Vandell, *University of California-Irvine*
Xinping Zhang, *Nanjing Normal University*

Abstracted and/or Indexed in: PsycINFO/Psychological Abstracts; Linguistics and Language Behavior Abstracts; Contents Pages in Education; Sociological Abstracts; Education Index; Education Abstracts; Social Services Abstracts; EBSCOhost Products; Cabell's Directories; Family Index Database.

Peabody Journal of Education (ISSN: 0161-956X) is published quarterly and once in July for a total of 5 issues per year by Taylor and Francis Group, LLC, 530 Walnut Street, Suite 850, Philadelphia, PA 19106.

US Postmaster: Please send address changes to *Peabody Journal of Education*, Taylor & Francis Group, LLC, 530 Walnut Street, Suite 850, Philadelphia, PA 19106.

Annual Subscription, Volume 89, 2014
Print ISSN - 0161-956X, Online ISSN - 1532-7930

Institutional subscribers: US $779, UK £465, €619
Personal subscribers: US $94, UK £58, €76
Institutional and individual subscriptions include access to the online version of the journal. Institutional subscriptions include access for any number of concurrent users across a local area network. Individual subscriptions are single username/password only.

Production and Advertising Office: 530 Walnut Street, Suite 850, Philadelphia, PA 19106. Tel: 215-625-8900, Fax: 215-207-0047.
Production Editor: Michelle Smith

Subscription offices
USA/North America: Taylor and Francis Group, LLC, 530 Walnut Street, Suite 850, Philadelphia, PA 19106. Tel: 215-625-8900, Fax: 215-207-0050.
UK/Europe: Taylor and Francis Customer Services, Sheepen Place, Colchester, Essex CO3 3LP, UK. Tel: +44 (0)-20-7017-5544, Fax: +44 (0)-20-7017-5198.

For a complete guide to Taylor and Francis Group, LLC's journal and book publishing programs, visit our website: **www.taylorandfrancis.com**

Copyright © 2014 Taylor and Francis Group, LLC. All rights reserved. No part of this publication may be reproduced, stored, transmitted, or disseminated in any form or by any means without prior written permission from Taylor and Francis Group, LLC. Taylor and Francis Group, LLC grants authorization for individuals to photocopy copyright material for private research use. The publisher assumes no responsibility for any statements of fact or opinion expressed in the published papers. The appearance of advertising in this journal does not constitute an endorsement or approval by the publisher, the editor, or the editorial board of the quality or value of the product advertised or of the claims made for it by its manufacturer.

Permissions. For further information, please visit: http://www.tandf.co.uk/journals/permissions.asp

Instructions for authors can be found online at www.tandfonline.com/hpje.

September 2014

PEABODY JOURNAL OF EDUCATION, 89: 415–418, 2014
Copyright © Taylor & Francis Group, LLC
ISSN: 0161-956X print / 1532-7930 online
DOI: 10.1080/0161956X.2014.938587

Routledge
Taylor & Francis Group

Introduction to Clinical Partnerships in Teacher Education: Perspectives, Practices, and Outcomes

Ann E. Larson and Diane W. Kyle
University of Louisville

In this issue of the *Peabody Journal of Education*, we address the critical topic of clinical partnerships as transformative in preparing teachers for today's and tomorrow's classrooms. This issue is most timely in light of the National Council for Accreditation of Teacher Education's (NCATE's) 2010 Blue Ribbon Panel report "Transforming Teacher Education: A National Strategy for Preparing Effective Teachers." Panel members challenged teacher educator programs to form clinical partnerships as an organizing structure within which all stakeholders would commit to the recruitment, admission, preparation, assessment, and continuing development of teachers who effectively enable the learning of all students in all contexts. According to Arne Duncan (2010), U.S. Secretary of Education, "The report of NCATE's Blue Ribbon Panel marks the most sweeping recommendations for reforming the accreditation of teacher preparation programs in the more than century-long history of our nation's education schools." Paralleling NCATE's report is a policy brief presented by the American Association of Colleges for Teacher Education (AACTE, 2010), which specifically addresses clinical preparation and notes that "high-quality preparation programs are *school-embedded*" (p. 5).

The articles that follow address the recommendations of NCATE and AACTE as critical to the preparation of teacher candidates. The authors, leaders in the field of educator preparation, share details of exemplary programs, address related policy issues, and argue for decision making and change as the work goes forward. Before elaborating on the contributions, however, we share our own development as teacher educators and what led us to see merit in this theme.

Our professional journeys began as classroom teachers who in time served as "cooperating" teachers for student teachers. Although we found teaching rewarding, we each sought further growth and entered doctoral programs. Our individual journeys led us eventually to join the College of Education and Human Development at the University of Louisville (UofL).

During our years at UofL, we have been involved in a clinical approach to preparing our teacher candidates. As part of a college with a long history of field-based programs, we followed the lead of faculty who established the college and shaped its perspectives and commitments. Further, we were encouraged by Dean Ray Nystrand, who led the college as a charter member of

---

The authors acknowledge the contributions of Elise Romines, a College of Education and Human Development doctoral student, for her careful editing and resource identification in the preparation of this issue.

Correspondence should be sent to Ann E. Larson, College of Education and Human Development, University of Louisville, Louisville, KY 40292. E-mail: aelars@exchange.louisville.edu

the Holmes Group and participated in national conversations in the 1990s about university-school collaborations for teacher education, professional development, and school reform.

We each served as "university liaisons" at Professional Development Schools, which involved providing on-site classes, observing teacher candidates in field and clinical experiences, providing assessments of candidate performance as a team with mentor teachers, offering and participating in professional development opportunities, conducting school-based and collaborative research studies, and coauthoring and copresenting with our teacher colleagues and candidates as we all learned together. We feel enriched by these experiences that shaped us as teacher educators and explain why the present advocacy of a clinical approach resonates so strongly with us. As administrators, we provide support to colleagues who now serve in roles we once had and who, with their own talents and insights, shape what a clinical approach currently means in our urban context.

Knowing of excellent work taking place nationally on clinical approaches, we concluded that an issue of the *Peabody Journal of Education* on this topic would afford a wonderful opportunity to share examples, results, issues, and challenges. Contributors are leaders in educator preparation and represent highly regarded programs and organizations across the country.

James G. Cibulka, president of the Council for the Accreditation of Educator Preparation (CAEP), contributes the Foreword to the issue. His background as a dean and now as organizational leader provides him with extensive knowledge of the current state of teacher education. He offers a national policy perspective critical in framing the articles that follow.

Betty Lou Whitford, Dean of the College of Education at Auburn University, and her colleague Susan Kidd Villaume put current practices about clinical preparation into historical context. They look anew at the evolution of teacher education, the influence of accreditation policies and standards, and an interpretation of what a clinical approach means. They offer insights about the benefits and challenges to consider in advocating for such an approach and guide reading of the subsequent articles with a challenge toward "a shared commitment to successful student learning as the core mission of public schools in a democracy."

The next several contributions describe varied examples of clinical partnerships in teacher education and emergent issues to be addressed. Bruce E. Field and Irma J. Van Scoy of the University of South Carolina continue the retrospective analysis begun by Whitford and Villaume. The University of South Carolina Professional Development Network can boast of sustaining university–school partnerships spanning more than two decades. The authors share lessons learned from their early years through years of change to current work. They remind us of the critical need for relationship building, a shared vision, dedicated leadership, and a view of institutional change as a source of strength and basis for growth.

Following this, Robin Hands and Yuhang Rong of the University of Connecticut provide a descriptive account of how their Integrated Bachelor's and Master's Program, developed in partnership with several area school districts, demonstrates a well-designed clinical model. Faculty with specifically designated roles, a coteaching emphasis, coursework connected to classroom experiences, and an ongoing use of assessment data provide a foundation for their "schools as clinics" image of learning sites.

With colleagues Melissa Evans-Andris, Harrie Buecker, W. Blake Haselton, Penny Howell, Caroline Sheffield, Christine Sherretz, and Ingrid Weiland, we next present a description of our clinical model in the urban context of the University of Louisville. Implementation occurred consistent with a university commitment to community engagement and improvement. Recognizing challenges experienced in a high-poverty area of our city, the university encouraged all units to consider how to make a positive difference within this Signature Partnership Initiative (SPI). Our college responded with a focus on the development, implementation, and assessment of our clinical model within SPI schools, beginning with one having the highest rate of student poverty in the state. We share the evolution of the model in two SPI elementary schools and its eventual expansion to a middle school. We describe components that appear to be most powerful in establishing partnerships, insights about the continued development of the model, and needed topics for research.

Continuing the focus on program outcomes and impact, Elizabeth A. van Es, Judith Haymore Sandholtz, and Lauren M. Shea provide findings from research conducted on their partner-based program at the University of California, Irvine. They examined the experiences, outcomes, and perceptions of secondary mathematics and science candidates in both a 4-year undergraduate partnership program and a 1-year postbaccalaureate program. The data revealed surprising results as candidates in each group made progress toward teaching effectiveness yet still needed support to reach ambitious teaching practices and classrooms of "rich discourse communities." The authors argue that a combination of "broad and up-close" assessment data can help determine candidates' readiness and areas for continued growth.

Continuing the discussion further, Morva McDonald, Elham Kazemi, Megan Kelley-Petersen, Karen Mikolasy, Jessica Thompson, Shelia W. Valencia, and Mark Windschitl from the University of Washington argue that without creating a meaningful integration between coursework and fieldwork, reform in teacher education will not achieve the desired outcomes. They posit the need for simultaneous innovation in three areas of teacher preparation (organizational structures and policies, content and curriculum, and teacher education pedagogy).

Establishing assessment as integral to clinical models in teacher education requires committing to evidence-based decision making and engaging all partners in the process. Ellen McIntyre, Dean of the College of Education at the University of North Carolina-Charlotte and her colleagues, Tina Heafner, and Melba Spooner describe such a process, using as their framework for discussion two of the CAEP standards: Standard 2, Clinical Partnerships and Practice, and Standard 4, Program Impact. With their secondary education program as an example, they share a program evaluation framework and formative and summative measures that document impact for all stakeholders, including students. They affirm the intention of the CAEP standards and argue that documenting impact "can become more visible to all who have a vested interest in the success of school children and those who teach them."

Although the articles to this point address clinical approaches to initial teacher preparation, Alyson Adams and Dorene D. Ross extend the discussion with their focus at the University of Florida on a clinical approach to graduate teacher education. Participants in this off-campus program engage in course work that intentionally addresses reform needs within their own classrooms and schools. Offered mostly online with local support, the program offers "support for the learning and leadership of practicing teachers." Data from research studies have documented positive program impact on teachers' and principals' perceived changes in teachers' instructional practice, conceptualization of teaching, and inquiry about practice. Further data note the improvement of students' reading and mathematics achievement and school attendance in the classrooms of program teachers. Adams and Ross conclude with an invitation to collaborate with other "like-minded teacher educators who can envision new approaches to graduate education for practicing educators."

Providing a culminating article, Linda Darling-Hammond of Stanford University, 2012 recipient of the Grawemeyer Award in Education and for many years an advocate of school–university partnerships, synthesizes key issues in clinical teacher preparation nationally and internationally. She challenges the field to consider the reforms needed to bring this approach to prominence and concludes, "Strengthening clinical practice in teacher preparation is clearly one of the most important strategies for improving the competence of new teachers and the capacity of the teaching force as a whole."

Sharon Porter Robinson, President and CEO of the American Association of Colleges for Teacher Education, provides insightful and powerful comments in the afterword to the issue. Most appropriately, she speaks to audiences of university faculty and administrators, school district and school-based educators, organizational leaders, and policy developers. She concludes this theme issue with a realistic and urgent look to the future: "Although high-quality clinical practice and clinical partnerships are not yet the norm in today's preparation programs . . . these should be at the heart of teacher preparation and the focus of innovation. . . . Extensive clinical development is a program standard that must be met."

REFERENCES

American Association of Colleges for Teacher Education. (2010). *The clinical preparation of teachers: A policy brief.* Washington, DC: Author.

Duncan, A. (2010, November 16). Secretary Arne Duncan's Remarks to National Council for Accreditation of Teacher Education. U.S. Department of Education. Retrieved from http://www.ed.gov/news/speeches/secretary-arne-duncans-remarks-national-council-accreditation-teacher-education

National Council for Accreditation of Teacher Education. (2010, November). *Transforming teacher education through clinical practice: A national strategy to prepare effective teachers.* Report of the Blue Ribbon Panel on Clinical Preparation and Partnerships for Improved Student Learning. Washington, DC: Author.

PEABODY JOURNAL OF EDUCATION, 89: 419–422, 2014
ISSN: 0161-956X print / 1532-7930 online
DOI: 10.1080/0161956X.2014.938589

Routledge
Taylor & Francis Group

Foreword: Systemic Strategies to Create Clinically Rich Teacher Preparation

James G. Cibulka
Council for the Accreditation of Educator Preparation

As the title of this issue of the *Peabody Journal of Education* suggests, the articles within address various perspectives, practices, and outcomes related to clinical partnerships. Taken together, they provide additional evidence that clinical partnerships are a potentially powerful strategy for transforming teacher preparation programs. There certainly are encouraging signs that convergent forces now support this transformation. The Council for the Accreditation of Educator Preparation (CAEP) has made it a priority in its new standards for teacher preparation programs (CAEP, 2013). The American Association of Colleges for Teacher Preparation (2010) has endorsed the concept. The Association of Teacher Educators (2000) has been updating its standards for field experiences. Both of the national teachers unions have written reports advocating strong clinical preparation (American Federation of Teachers, 2012; National Education Association, 2014; Van Roekel, 2011). The Council of Chief State School Officers (2012) has included this reform among its critical tenets for transforming teacher and leader preparation. In the education policy world, such consensus is rare and certainly is indicative of positive momentum.

At the same time, the articles in this issue also illustrate that implementation of this reform will entail many challenges. The National Council for the Accreditation of Teacher Education's (2010) Blue Ribbon Panel Report argued that serious systemic barriers must be overcome to instantiate a clinically based partnership model. In this brief foreword I would like to call attention to four such impediments—institutional fragmentation, a limited knowledge on effective clinical preparation, a weak data infrastructure to guide transformation, and lack of evidence on costs. I argue that none of these constraints are insurmountable.

OVERCOMING INSTITUTIONAL FRAGMENTATION

The new CAEP standards explicitly call for effective partnerships with P-12 schools as an important feature of high-quality clinical practice. The standards seek to create the strong ties between higher education providers[1] and the field that one finds in other clinically based professions. Yet CAEP's conception that "partners (will) co-construct mutually beneficial P-12 school and community arrangements" does not describe standard practice across the country at present. Many

---

This article is not subject to U.S. copyright law.

[1] More than 90% of new teachers are produced in institutions of higher education.

Address correspondence to James G. Cibulka, Council for the Accreditation of Educator Preparation, 1140 19th Street NW, Suite 400, Washington, DC 20036. E-mail: James.Cibulka@caepnet.org

higher education programs define their relationship with school districts primarily in terms of the need to place their candidates in schools for student teaching assignments rather than in terms of providing benefits which schools need. Consequently, connections with P-12 schools remain tenuous in too many higher education preparation programs. The two institutions have been described, not inappropriately, as silos with separate values, interests, priorities, funding, and organizational cultures. Many school officials complain that candidate placements compete with their priorities to raise student test scores, especially in a high-stakes testing environment, although this concern appears to lessen where a coteaching model of student teaching has been adopted.

Despite this historic divide, P-12 schools and higher education share critical needs today. P-12 schools cannot raise student achievement unless higher education preparation programs produce effective teachers and school leaders. Higher education institutions also need college-ready applicants to reduce costs of remediating entering freshmen. Both institutions are under pressure to raise graduation rates and to demonstrate improved educational outcomes. Equally important, the effective implementation of new college and career ready standards are a mutual responsibility of P-12 and higher education. It is these common interests, responsibilities, and mutual dependence that can propel stronger partnerships between P-12 schools and universities.

BUILDING A STRONGER KNOWLEDGE-BASE ON CLINICAL PREPARATION

The National Research Council (2010) noted that research points to strong field experiences as one of three critical ingredients needed to prepare effective teachers. The challenge is that, as the NRC notes, we do not know enough about how *specific* clinical practices and features of preparation programs produce effective teachers for today's diverse P-12 learners. Research linking preparation program practices with high outcomes is beginning to provide better guidance to the field, but a research and development agenda on clinical preparation is needed (Grossman, 2014). For example, what are the attributes of a strong partnership between a preparation program and the schools where candidates are prepared? What should be the qualifications, training, roles, and performance expectations for "cooperating" or "supervising" instructors? How are various clinical experiences described, defined, and sequenced in relation to theoretical learning? What is the optimal length of clinical experiences prior to entering the classroom? Thus far, however, answering these questions through research on preparation has been of marginal interest to scholars. It is encouraging, however, that many younger faculty members appear to value extensive engagement with schools and are committed to program redesign.

In a related development, we are on the cusp of having assessments of candidate performance that are grounded in research, are performance based, and are psychometrically valid. We hope that the development of these stronger assessments will encourage preparation programs to backward map from the assessment requirements and the data that they provide to redesign their programs.

In addition to research, a stronger culture of evidence and innovation is required to strengthen the profession's knowledge base about effective practices in clinical preparation. Preparation programs are in various stages of making the shift to the use of data for continuous improvement of their programs (Peck & McDonald, 2014). CAEP's new standards will require preparation programs to develop a more sophisticated understanding of quality evidence and actionable data and then to use that information for program redesign. Continuous improvement and research should be viewed as complementary strategies for strengthening the knowledge base on clinical preparation and partnerships for improved P-12 student learning.

STRENGTHENING THE DATA INFRASTRUCTURE

Educator preparation is in the midst of a shift from a data-poor to a data-rich environment. The data already are becoming more accessible through new platforms and software that allow the data to be described, analyzed, shared, and reported. However, “lots of data” should not be confused with “good data.” Schools of education complain that they are inundated by multiple, often competing, reporting requirements. Thus, despite extensive data reporting, both schools of education and their critics tend to share a frustration that today’s approach to data collection is insufficient for quality assurance or program improvement. A key cause is poor data. The field of educator preparation still has no common definitions of important program features. Without definitions of key constructs such as dimensions of clinical practice, we cannot set data standards to guide research, continuous improvement, and accountability. Consensus on key constructs and their definitions are needed to measure quality, compare it, or improve it. These are basic requirements of a scientific, evidence-driven profession. CAEP and CCSSO have initiatives to strengthen data standards and create stronger, more coherent data systems. Improving the quality of the data and their usefulness for both continuous improvement and quality assurance are essential to develop a better understanding of the role clinical preparation plays in producing effective teachers for today’s diverse learners.

A COST-EFFECTIVENESS PERSPECTIVE ON CLINICAL PARTNERSHIPS

It is commonly assumed that clinical partnerships will cost more than traditional models that are largely classroom based. One obvious place of underinvestment is in recruitment, training, and compensation of cooperating teachers. Cost is sometimes held out as a barrier to reforming preparation programs to make them more clinically rich. In point of fact, no systematic studies have been done of the incremental costs of clinically rich preparation programs compared with their traditional program counterparts. Once we develop agreement on the definitions and attributes of strong clinical partnerships and preparation, as was mentioned earlier, we can build prototypes and measure their respective costs.

CAEP has advocated the use of a cost-effectiveness perspective. Knight, Monk, and Picus (2012) outlined the attributes of this approach. One of the distinguishing features of a cost-effective model is to look at costs in relation to the *benefits* produced by the more clinically rich approach. Those benefits should include more placements of graduates in low-performing schools, less attrition, and improved P-12 student learning. In today’s resource-challenged environment for higher education, and for teacher preparation more particularly, a strong case must be made that stronger clinical approaches to preparation, even if they are marginally more costly, will yield important additional benefits. That must be empirically studied and demonstrated.

I have framed the four systemic impediments just presented not as impenetrable but instead as opportunities for progress in our field. Whether clinical preparation will be an effective strategy for transforming our nation's preparation programs depends on directly engaging institutional fragmentation, strengthening the knowledge base through research and continuous improvement, attending to stronger data standards and systems, and building evidence on cost-effectiveness. I hope that we will see more empirical research focused on addressing these challenges.

AUTHOR BIO

James G. Cibulka, Ph.D., serves as the current president of the Council for the Accreditation of Educator Preparation (CAEP) and its predecessor NCATE after having an acclaimed career in higher education, including as a former Dean of the College of Education at the University of Kentucky. He is also the author of numerous books and articles on education policy, administration, and community development.

REFERENCES

American Association of Colleges for Teacher Preparation. (2010, March 11). *The clinical preparation of teachers: A policy brief.* Washington, DC: Author. Retrieved from http://www.aacte.org/pdf/Government_Relations/Clinical%20Prep%20Paper_03-11-2010.pdf

American Federation of Teachers. (2012, December). *Raising the bar: Aligning and elevating teacher preparation and the teaching profession.* Report of the American Federation of Teachers Teacher Preparation Task Force. Washington, DC: Author. Retrieved from http://www.aft.org/pdfs/highered/raisingthebar2012.pdf

Association of Teacher Educators. (2000). *Standards for field experiences in teacher education.* Reston, VA: Author. Retrieved from http://www.ate1.org/pubs/uploads/nfdfstds.pdf

Council for the Accreditation of Educator Preparation. (2013). *Accreditation standards.* Retrieved from http://www.caepnet.files.wordpress.com/2013/09/final_board_approved1.pdf

Council of Chief State School Officers. (2012, December). *Our responsibility, our promise: Transforming educator preparation and entry into the profession* (CCSSO *Task Force on Educator Preparation and Entry into the Profession).* Washington, DC: Author. Retrieved from http://www.ccsso.org/Resources/Publications/Our_Responsibility_Our_promise_Transforming_Educator_Preparation_and_Entry_into_the_Profession.html#sthash.i8VWLYn6.dpuf

Grossman, P. (2014, March 2). Presentation on panel "Clinical preparation, from policy to research to practice: Strengthening the programs." Annual meeting of the Association of Colleges for Teacher Education, Indianapolis, IN.

Knight, D., Monk, D. H., & Picus, L. O. (2012, August). *Measuring the cost effectiveness of rich clinical practice in teacher preparation: Part one, Understanding the Problem.* Washington, DC: Council for the Accreditation of Educator Preparation.

National Council for Accreditation of Teacher Education. (2010). *Transforming teacher education through clinical practice: A national strategy to prepare effective teachers.* Report of the Blue Ribbon Panel on Clinical Preparation and Partnerships for Improved Student Learning. Washington, DC: Author.

National Education Association. (2014, January). *Teacher residencies: Redefining preparation through partnerships. NEA Center on Great Public Schools.* Washington, DC: Author. Retrieved from http://www.nea.org/home/teacher-residencies.html

National Research Council. (2010). *Preparing teachers: Building evidence for sound policy.* Washington, DC: Author. Retrieved from http://www.nap.edu/catalog.php?record_id=12882

Peck, C. A., & McDonald, M., (2014). *Creating cultures of evidence in teacher education: Context, policy and practice in three "high data use" programs.* Unpublished manuscript. Seattle: University of Washington College of Education.

Van Roekel, D. (2011, December 11). *Leading the profession: NEA's three-point plan for reform.* Washington, DC: National Education Association. Retrieved from http://www.nea.org/assets/docs/PR_LeadingtheProfession.pdf

PEABODY JOURNAL OF EDUCATION, 89: 423–435, 2014
Copyright © Taylor & Francis Group, LLC
ISSN: 0161-956X print / 1532-7930 online
DOI: 10.1080/0161956X.2014.938590

Routledge
Taylor & Francis Group

Clinical Teacher Preparation: A Retrospective

Betty Lou Whitford and Susan Kidd Villaume
Auburn University

In this article, we explore how teacher preparation programs have developed from the mid-1800s to present day, emphasizing changes in the clinical component. Drawing from the history of teacher education from the normal schools of the 19th century to present-day interest in clinically based preparation, we first review the migration of teacher preparation from normal schools into higher education. Next we discuss how accreditation has shaped programs. We then turn our attention to major initiatives in the 1980s that explicitly focused on linking school improvement with teacher education reform—partnerships that emphasized clinical aspects of teacher preparation. Finally, we discuss efforts to enhance clinical learning, highlighting instructional strategies and issues regarding design, settings, and outcomes for programs as they work to meet challenging new accreditation standards.

THE EMERGENCE OF NORMAL SCHOOLS FOR TEACHER PREPARATION

Histories of teacher education compiled by Angus (2001), Edelfelt and Raths (1999), and Labaree (2008) provide insight into the evolution of the academic and clinical components of the ways teachers have been prepared in the United States. These histories note that prior to the mid-1800s, schooling took place in a variety of settings, with churches and homes being the most common sites. When schools were available, teaching required no formal preparation. Individuals with good moral character, as verified by one or more local ministers, and schooling higher than the pupils could be deemed suitable teachers.

An educational reform movement of the mid-1800s widened schooling accessibility, broadened the curriculum, and began creating "norms" for teaching practice that later included procedures for professional certification. Known as the common school era and led by educators such as Henry Barnard, James Carter, and Horace Mann, the movement envisioned a system that provided common educational experiences for children from different backgrounds in public schools staffed by formally prepared teachers. Although provision of state-supported public education proceeded on different timetables across states, a growing public commitment to education resulted in an increased demand for teachers. This demand gave rise to normal schools, devoted to preparing teachers, and shifted teacher credentialing from ecclesiastical officials to civil authorities.

Correspondence should be sent to Betty Lou Whitford, College of Education, Auburn University, 3084 Haley Center, Auburn, AL 36849. E-mail: BLW0017@auburn.edu

Many of the early normal schools were independent programs, locally organized and staffed. The most prominent form of normal schools, however, came to be the state-supported and controlled teacher preparation programs. In their early versions, local, private, and state normal schools were available as an option for study at a high school level. Although the establishment of these programs was an important step in developing "norms" or expectations for teaching and teacher preparation, considerable variation existed across programs.

For example, the duration of these programs varied from 1 to 4 years. The academic and clinical components also varied. In some programs, the academic component was totally or primarily focused on disciplinary subject matter, whereas others included professional courses in educational psychology, foundations of education, the history of education, and/or general methods of teaching. Most normal schools included some type of on-the-job training; some offered a student teaching experience after completion of coursework, whereas others integrated work in classrooms throughout the program.

Although normal schools were the typical form of teacher preparation during this period, the urgent demand for teachers led some school systems to develop an alternative path—the teacher institute. These institutes were shorter in duration than the curriculum of normal schools, ranging from a few days to a few months. In contrast to normal schools, the institutes frequently occurred during the summer, and some were void of on-the-job training in classrooms.

In an attempt to establish some consistency across all teacher preparation programs, in 1870 the American Normal School Association proposed a 2-year program of study for all teacher preparation programs and a shared set of professional coursework. This proposal was met with "fierce resistance" by the membership (Edelfelt & Raths, 1999). Although formal teacher preparation was now the norm, program providers were not quick to agree upon commonalities.

Despite the absence of uniform guidelines for teacher preparation programs, the use of subject matter tests for credentialing was widely practiced. In the early years of the reform movement, local superintendents administered examinations on subject matter to determine if individuals were appropriately qualified to teach. By the late 1800s, a movement was well under way to centralize teacher certification at the state level, with one of the first steps being to replace local tests with standardized state examinations. The emphasis on credentialing based solely on subject matter indicates that the profession was yet in its early stages in defining the academic content of pedagogy and undecided on the importance of a clinical component.

TEACHER PREPARATION: A HIGHER EDUCATION ENTERPRISE

Several important developments in teacher preparation marked the early to mid-1900s. By the early 1900s, consumer demand and market pressure for more teachers served as levers to elevate teacher preparation from normal schools situated in high schools to programs within higher education. Initially, normal school programs offered at the high school level began converting to credentialing programs at the college level with the credential obtained after completing 1, 2, or 3 years of study but short of the 4 years required for the baccalaureate degree. As normal schools converted to teachers colleges, the curriculum also evolved into 4-year programs. These 4-year institutions had the faculty capacity to provide study in education and in the liberal arts, so the next logical changes were to convert teachers colleges first to regional state colleges and then to state universities as these institutions sought to increase enrollment. Thus, regional universities became sites where large numbers of teachers could be educated in an institution with a mission extending beyond teacher preparation.

The relocation of teacher preparation into higher education arguably distanced teacher preparation programs from the normal school's close connection to local schools. Further, the move embedded teacher preparation programs in the culture of higher education with its emphasis on the academic curriculum and the norms of the professoriate. As a result, teacher preparation became more generalized in nature in the sense that programs were preparing prospective teachers to earn licensure to teach in any school rather than in a specific school or school system formally associated with a local normal school.

Teacher preparation programs became firmly entrenched in higher education during the first half of the 20th century. However, no agreement on program standards had been established regarding the nature of either the academic or clinical components of teacher preparation, and wide variations existed. Of interest, despite few guidelines for teacher preparation, in the early 1900s, states began moving away from using standardized exams of subject matter as a pathway to teaching and toward teacher certification based on completion of a normal school or university program with no examination required (Angus, 2001).

The strategy of making certification contingent on completion of a teacher preparation program coupled with elimination of the certification-by-exam route was supported by the National Commission on Teacher Education and Professional Standards. This direction gained momentum through the mid-1900s as more states adopted an "approved program" approach. In essence, "the state department would approve the teacher training institution, leaving the details to the faculty to determine" (Angus, 2001, p. 23). Although this approach closed the door to a certification-by-exam route to teaching, Teacher Education and Professional Standards leaders were concerned that the "approved program" approach was not ensuring quality. Subsequently, the emphasis shifted to developing standards for accreditation.

REDESIGNING TEACHER PREPARATION THROUGH ACCREDITATION

In the mid-1900s, a movement emerged to enhance the quality of teacher preparation programs and elevate the status of teacher education through accreditation. Because higher education regional associations did not yet consider normal schools and teachers colleges as "mainstream" colleges and were not receptive to accrediting them, teacher educators worked through the American Association of Teachers Colleges (AATC)[1] to develop standards and to accredit themselves through self-study. In their historical review of standards in teacher education, Edelfelt and Raths (1999) noted that clinical experiences were viewed as critical to teacher preparation from the beginning of accreditation efforts.

According to Edelfelt and Raths (1999), AATC's Committee on Standards and Surveys appointed a subcommittee in 1945 with a specific charge to study student teaching. The subcommittee's report eventually became the basis for one of the AATC accreditation standards and subsequently part of standards adopted by the National Council for Accreditation of Teacher

---

[1] AATC is now the American Association of Colleges for Teacher Education (AACTE).

Education (NCATE) when that body was established in 1954.[2] Examples of these recommendations included

> (1) laboratory experiences be an integral part of work in each of the four years of college; (2) before student teaching, laboratory experiences be integrated into other parts of the college program; (3) provisions be made for post-student-teaching experiences; (4) provisions be made for full-time student teaching; (5) assignments be made cooperatively by the people most acquainted with the student and his or her needs and the opportunities in the laboratory situation; and (6) the college faculty member and the cooperating teacher share in supervision (pp. 13–14).

These guidelines are a marked departure from traditions that positioned student teaching at the end of the program with little if any thought devoted to the connection of coursework to such clinical learning.

Expectations related to clinical components have remained a mainstay through multiple revisions of NCATE's accreditation standards. And when the Teacher Education Accreditation Council was founded in 1997, that body's accreditation guidelines also emphasized an inquiry-based self-study that linked academic preparation with clinical practice.

As the profession's thinking about the clinical component continued to develop, the importance of more collaboration between universities and schools in designing effective teacher preparation programs became apparent. Dominating the conversation in the mid-1980s and 1990s was talk about university–school partnerships in the form of professional development schools (PDS) as locations for teacher preparation, faculty professional development, applied research, and improved student learning. As a result, in 2001, NCATE released *Standards for Professional Development Schools*, which articulated the core characteristics of a professional development school in five categories of standards: (a) learning community; (b) accountability and quality assurance; (c) collaboration; (d) equity and diversity; and (e) structures, resources, and roles.

The release in 2010 of NCATE's Blue Ribbon Panel Report, *Transforming Teacher Education Through Clinical Practice: A National Strategy to Prepare Effective Teachers*, represents the next iteration of guidelines for clinical practice. This report, building on the experience of the PDS movement, calls for teacher preparation programs that are "fully grounded in clinical practice and interwoven with academic content and professional courses" (p. ii). This report, along with experiences with and learning from the PDS movement, provides the grounding for the most current thinking about clinical teacher preparation. This thinking is articulated in the new set of accreditation standards developed by the Council for the Accreditation of Educator Preparation (CAEP) when NCATE and Teacher Education Accreditation Council merged in 2013. CAEP's second standard, Clinical Partnerships and Practice, underscores the importance of mutually beneficial partnerships with well-integrated academic and clinical components; well-prepared and effective clinical educators; and collaboratively designed clinical experiences that (a) are woven throughout preparation programs, (b) focus on student learning, and (c) make use of performance-based assessments.

---

[2] In 1954, educators associated with various national organizations, including the National School Boards Association, American Association of Colleges for Teacher Education, Council of Chief State School Officers, and the National Education Association, created NCATE which assumed responsibility for national accreditation previously handled by AACTE.

Although accreditation standards do not necessarily reflect the realities of what routinely has happened in teacher preparation programs, they do serve to articulate what has been envisioned as desirable. Clearly, a historical look at accreditation, with particular attention to standards related to clinical practice, reflects a long-standing vision of preserving and refining a practice-based component as integral to learning to teach.

LINKING SCHOOL AND TEACHER EDUCATION REFORM

Efforts to redesign teacher preparation through voluntary accreditation were taking place amidst, and arguably in response to, intense public scrutiny of both public schools and teacher preparation from a number of segments of society, including philanthropic foundations, business leaders, and policymakers, including governors and presidents. Most relevant to our discussion of clinical teacher preparation are reform efforts of the latter half of the 20th century explicitly aimed at addressing many of the criticisms by linking school improvement with changes in teacher preparation.

During the 1970s and 1980s, substantial scholarly examinations of education illuminated the complexities of schooling and educational change in ways that enhanced understandings of the educational process previously derived primarily from learning theory, human growth and development, and other research and theory relying on the individual as the unit of analysis. Using sociological theory and institutional perspectives, scholars and policy analysts examined schools as complex social organizations with an identifiable cultural life, explained the nature of teaching as a semiprofessionalized occupation; documented adaptation processes during planned change efforts; and highlighted deleterious effects of the disconnects among recruiting, preparing, and sustaining quality teachers (Berman & McLaughlin, 1978; Goodlad, 1984; Lortie, 1975; Sarason, 1971; Schlechty, 1976; Schlechty & Vance, 1981; Zeichner & Tabachnick, 1981). The perspective offered from the work of these and other like-minded scholars influenced the development of several key reports and the creation of national initiatives and organizations that embraced the linking of teacher education reform with school improvement as critical to improving the quality of both.

For example, in 1983, the National Commission on Excellence in Education issued *A Nation at Risk*, which warned of “a rising tide of mediocrity” in American education. In response, the Carnegie Corporation convened a group of prominent leaders from education, business, and government, leading to the issuance in 1986 of *A Nation Prepared: Teachers for the 21st Century* (Carnegie Forum on Education and the Economy, 1986). One recommendation was the creation of the National Board for Professional Teaching Standards, which came to influence the content of university-based advanced certification programs for practicing educators as well as the process for assessing teaching performance. The report also advised, drawing on the 1910 Flexner Report’s recommended model of medical education, that a bachelor’s degree in the arts and sciences should be prerequisite to a professionalized master’s program in teacher preparation that included internships and residencies in schools (de Leon, 2003).

Also in the mid-1980s, other reform-oriented groups began to promote more systematic collaboration and cooperation among those with responsibilities for educating teachers. For example, the National Network for Educational Renewal was established by John Goodlad and colleagues to provide support for a set of partnerships of school teachers and leaders, teacher educators, and arts and science faculty in specific geographic locations with the explicit aim of "simultaneous renewal" of teacher education and schooling (Goodlad, 1990).

In one National Network for Educational Renewal site, members of the Southern Maine Partnership created an innovative postbaccalaureate teacher preparation program codesigned and co-led by teams of university and school-based educators. Located in multiple partnership districts, the central features came to include course work wrapped around a yearlong, standards-based mentored internship evaluated through performance assessments. The program led to initial certification with a subsequent component focused on performance assessment in classrooms for practicing novice teachers, which completed the students' master's degree. Eventually, this program replaced the traditional undergraduate program and, for approximately 15 years, it was the only teacher preparation option offered at the University of Southern Maine (Whitford, Ruscoe, & Fickel, 2000).

Another major reform initiative originating in the mid-1980s was created by the Holmes Group formed by education deans at research universities and later renamed the Holmes Partnership to acknowledge more explicitly the importance of university partnerships with schools. The centerpiece of this initiative was the call for the creation of PDS that, unlike higher education based laboratory schools, would be a "regular elementary, middle, or high school that works in partnership with a university to develop and demonstrate" improvements in teacher preparation, professional development in both institutions, student achievement, and site-based applied research (The Holmes Group, 1986).

At Holmes Group institutions around the country, to varying degrees, teacher preparation became more collaborative between university-based and school-based educators. In some cases, new programs were codesigned and became an additional pathway, existing alongside more traditionally designed programs. In other cases, the partnership programs replaced more traditional programs. In the latter, courses were redesigned around the direct experiences in schools and classrooms rather than promoting short, fragmented practicum or observation assignments as part of university-based courses. Collaboration and cooperation grew to replace the sometimes positive but oftentimes disconnected "parallel play" that had previously characterized relationships between teacher educators and practicing educators.

The partnerships typically spawned new boundary-spanning roles where university and school educators took on new responsibilities in both arenas. Popular manifestations of new relationships included collaborative action research, joint design teams working on authentic problems of practice, cotaught university courses, codesigned and co-led professional development, and cosupervised teacher education students often placed in teams in partner schools (Whitford & Metcalf-Turner, 1999).

Another national initiative that promoted explicit connections between school and teacher education reform was created by the National Center for Restructuring Education, Schools, and Teaching founded at Teachers College by Linda Darling-Hammond and Ann Lieberman in 1990. One of many National Center for Restructuring Education, Schools, and Teaching initiatives at this time was the PDS Network, which brought together school and university representatives from 30 to 40 PDS partnerships several times annually to learn from one another by sharing "tales of success and tales of woe" and to advocate for and improve upon the PDS partnerships as a significant force for educational reform (Lauter, 1998).

CURRENT VIEWS OF CLINICAL LEARNING

Much of the current conversation about clinical teacher education builds on the experiences of the PDS movement and subsequent research that advance understanding of ways to better prepare novices to learn from practice in school cultures committed to helping all students learn. These conversations challenge us to look more carefully and think more deeply about three components in particular: practice-based learning, design and settings, and outcomes that facilitate clinical learning.

Practice-Based Learning

Instructional strategies that facilitate the development of thoughtful teachers capable of learning from practice are not new to teacher preparation programs. For example, case method, an instructional strategy found in preparation programs for multiple professions, has been used in teacher preparation programs for decades (Shulman, 1996). Cases typically include information on the student's background as well as records of performance and practices such as videos, teacher logs, student work, and assessment data that are presented for analysis and discussion. The focus is typically on identifying and analyzing issues affecting student learning and posing steps that could be taken to address those issues, improve teaching practice, and ultimately improve learning.

Likewise, microteaching has a long history in teacher preparation programs (Gage, 1978). With its emphasis on teaching scaled-down lessons targeting specific teaching techniques to peers or K-12 students, this strategy includes a debriefing to discuss what worked and what steps could be taken to improve the lesson.

These and other practice-based strategies such as demonstrations, guided practice, video analysis, portfolios, performance-based assessments, and action research have become familiar strategies in clinically enriched teacher preparation programs. Each can be aligned to one or more of the activities teachers engage in when placed in the roles of clinicians—planning, implementation, observation and analysis of student learning, and reflection on how to improve instruction. They can be used to emphasize understanding of teacher performance and decision making related to enacting instruction, managing student behaviors, posing questions, using examples, and the like. Many can also be used to put student performance and inquiry into evidence of student learning at the center of the analysis.

Newer pedagogies for clinical learning are doing just that—putting student learning at the center and drawing implications for teaching behaviors and decisions from analysis of that evidence. For example, an approach called "Looking at Student Work" can be instructive for understanding students' mistakes in reasoning and for altering related teaching practices when used over time (Blythe, Allen, & Powell, 1999). In an approach called "Lesson Study" (Fernandez & Chokshi, 2002), teachers collaboratively develop and teach lessons, analyze resulting evidence of student learning, and discuss what they learned from this shared experience. New digital technologies such as avatars are also being developed and used to support clinical learning.

In addition, teacher educators are paying more attention to the contribution of feedback, mentoring, and supervision across all practice-based pedagogies, acknowledging the social nature of learning as novice teachers are stretched to think about practice in supportive yet challenging ways. Predictably, CAEP (2013) is placing greater emphasis on the qualifications of clinical educators, with particular attention to professional development in mentoring and coaching for university supervisors and cooperating teachers. For example, at some sites, those in clinical roles participate in professional development on cognitive coaching and its support of reflective teaching (Costa & Garmston, 1985). In more recent work, a coteaching model is used where mentor teachers and interns assume a variety of collaborative roles (von Zastrow, 2009).

These practice- or clinically based strategies share some characteristics about teaching—and by extension, learning to teach—that Wood and Whitford (2010), in their study of professional learning communities, characterize as developing a professionalizing stance. That is, when situated in supportive institutional settings, strategies such as lesson study and analysis of student work position teachers to respond to student learning needs through collaborative inquiry involving problem identification, analysis of student learning, vetting of reasoning and decision making, and design of curriculum and assessments for diverse learners. Whether implemented in a classroom on a university campus or in a K-12 setting, these strategies can break down the isolating effects of classroom teaching and allow for blending and interweaving theory, research, and practice. When used over time in supportive conditions, these strategies contribute to teachers and those learning to teach becoming more adept at learning from practice (Darling-Hammond, 2006; Wood & Whitford, 2010).

Design and Settings

As documented in the 1945 report issued by a subcommittee of AATC's Committee on Standards and Surveys, those involved in teacher preparation have acknowledged the importance of laboratory, or controlled practice settings, as well as authentic classroom settings for well over 60 years. As understandings of teaching as a clinical profession have evolved, so have understandings of the importance of carefully designed practice settings for learning to teach. Current conceptions have grown well beyond traditions of parallel play in which student teachers practice instructional strategies taught by university faculty who know little about the school setting and do so in the classrooms of cooperating teachers who know little about the campus courses. We also have become more comfortable in questioning the simplistic notion that spending more time in schools equates to more effective preparation. Researchers are advancing knowledge of the kinds of clinical experiences that are most powerful and as well as the positive effects of spending more time in high-functioning classrooms with well-trained mentors (Grossman, 2010; Hammerness & Darling-Hammond, 2005; Ronfeldt, 2012; Zeichner, 2010). The clinical component of teacher education programs, now more broadly defined, includes collaboratively and carefully designed K-12 classroom opportunities as well as teaching simulations in a college classroom and virtual field experiences using websites such as http://insideteaching.org, hosted by the Center to Support Excellence in Teaching at Stanford University.

With growing understandings of the complexities of learning to teach, we are challenged to make deliberate decisions about the design of clinical learning experiences, asking questions such as the following: Will the lesson focus on a discrete, targeted strategy such as questioning, or will it be intentionally multifaceted? How many pupils will be involved? Will the pupils be peers, K-12 students, or perhaps avatars? Will the setting be a campus classroom, a school site, or a community program? Will there be observers, and if so, will the observers be a cooperating teacher, a university supervisor, and/or one or more peers? What kind of structure for feedback will be used? These decisions can lead to powerful and situated learning in productive contexts (Ball & Forzani, 2009; Grossman, 2010).

We also have deeper understandings of why university—school partnership is critical to clinical learning in teacher preparation programs and the importance of clinical sites with cultures of experimentation, collegiality, inquiry, and reflection. For example, Zeichner (2010) described the partnership context for such inquiry as a "third space" that thrives on the interplay of different perspectives and more "leveled" or equal relationships. Such social interactions can generate new synergies, supported by individuals in boundary-spanning roles who are adept at bridging the worlds of teacher preparation programs and K-12 classrooms.

Yet, if we are to prepare teachers with a commitment to ensuring the learning of all students, we must also solve the dilemmas and challenges of creating clinical learning spaces in a variety of school settings. Ideally, we want new teachers to be prepared where teachers are able to exhibit commitment to ensuring the learning of each of their students, in a setting where they are supported in that commitment by effective leadership and resources. However, given the inequities of American society, the schools more likely to exhibit these characteristics are also more likely to be in more affluent communities. Such schools are also less diverse than those in urban centers or poor rural communities where schools are more likely to be underresourced with higher dropout rates and more teacher and administrator turnover. Basing clinical learning in the context of more affluence and less diversity runs the risk of developing teaching practices that may not be as effective in under-resourced schools (Whitford & Metcalf-Turner, 1999).

Outcomes

Although there are undoubtedly other implications from "where we've been" in preparing teachers through clinical learning, the final area we address here is about program outcomes, particularly approaches to delineating "what teachers should know and be able to do." Edelfelt and Raths (1999) described the Commonwealth Teacher Training Study conducted in 1929, a project sponsored by the Carnegie Foundation for the Advancement of Teaching and the Commonwealth Fund that asked teachers and other educators to identify teacher activities and traits and to rate each regarding its importance. Although a list of teacher objectives was the result, teacher education as an enterprise was too decentralized for such a listing to be anything but advisory. The summary advice was that teacher educators should consider these objectives as they create courses, taking into account "method, content, and students" (p. 11).

The task of identifying the knowledge, skills, and dispositions needed by all teachers as well as teachers in specific disciplines or grade levels was taken up again during the emergence of competency-based programs in the 1960s and 1970s. Although this movement faded due to the difficulty in documenting the extensive list of recommended teacher competencies, another iteration emerged two decades later as standards-based teacher education (Zeichner, 2012). This time, more general standards were developed for both beginning and accomplished teachers.

In 1987, standards for novice teachers were developed by the Interstate New Teacher Assessment and Support Consortium (INTASC) as a project of the Council of Chief State School Officers. These were updated in 2011 using four headings: the learner and learning, content knowledge, instructional practice, and professional responsibility (Council of Chief State School Officers, 2011). In 2013, the updated INTASC standards were adopted by CAEP as the list of general knowledge, skills, and dispositions for Standard 1: Content and Pedagogical Knowledge (CAEP, 2013).

In 1989, the National Board for Professional Teaching Standards published its five core propositions aimed at describing accomplished teaching. These propositions reference a commitment to students and their learning, knowledge of subject matter and how to teach it, managing and monitoring student learning, learning from practice, and participation in learning communities. Thus for the first time, the "what a teacher needs to know and be able to do" was delineated into areas of knowledge needed by beginning teachers and areas needed by accomplished teachers.

The INTASC standards and National Board propositions are widely accepted and strongly supported by a host of professional education associations. Both sets of standards are general in nature in that they cut across all subject areas and grade levels. They also address the importance of subject matter and pedagogical knowledge as well as adaptive expertise in applying this knowledge to improve learning of diverse students.

At the state level over time, these general statements have developed into lists with varying degrees of specificity. For example, although some states adopted INTASC standards with little if any tweaking, in other states, the general lists spawned hundreds of elements and indicators of knowledge, skill, and disposition accompanied by elaborate, multileveled assessment procedures. When it has led to this latter laundry-list approach, the attempt to delineate the knowledge base for teaching and the warrant for professionalized claims to such knowledge (Sykes, 1992; Yinger, 1999) has come to be viewed by some as a barrier to the systemic and transformational change that is needed in teacher preparation. The reality is that the unrestricted growth of outcomes, typically couched as standards but with fine-grained parsing into elements and indicators, has saddled teacher preparation programs with a set of outcomes too large to support meaningful curriculum or assessment design (Zeichner, 2012).

There is evidence of an attempt to scale back the number of outcomes, an approach seen in the new CAEP standards as well as in the directive to SPAs to limit their standards to seven with no more than 28 elements across all standards. Even though recent updates of general outcomes are consistent with current visions of clinical teacher preparation and are typically stated in more general terms, some teacher educators have proposed that core, or high-leverage, practices are the units that make the most sense to use in the construction of practice-based curriculum (Ball & Forzani, 2009; Grossman, 2010; Lampert, 2010). An example of a high-leverage practice is orchestrating class discussion, "unpacked" into teaching strategies such as probing student thinking, identifying and addressing student misconceptions, and tracking participation (Lampert, 2010). As Zeichner (2012) argued, "High-leverage teaching practices and routines that are believed to support high-quality student learning involves a grain size that is more usable by new teachers and their teacher educators than either the lists of hundreds of competencies or general standards" (p. 378).

CONCLUSION

In this article we have provided an overview of the history of teacher preparation in the United States with special attention to clinical components of learning to teach. We have treated "clinical" broadly to include various forms of both direct and simulated experience with K-12 teaching practices and have reviewed selected influences that accreditation and other reform efforts have had on these experiences. The discussion reveals a growing sophistication of clinical practices in terms of variety and complexity as well as knowledge about factors that enhance clinical learning, including instructional practices, program design, and program settings, particularly school–university partnership settings. The recommendations in the Blue Ribbon Panel Report and the new CAEP standards encourage yet more attention to clinical learning and program coherence with keener focus on the learning of students in K-12 schools.

More sophisticated treatment of clinical learning in preparation programs doubtlessly strengthens programs and improves the skills of novice teachers in identifying and analyzing problems of practice aimed at advancing student learning. However, the benefits of clinically enriched teacher preparation are not without challenges. For example, we know that as clinical components of teacher preparation programs are enhanced, so likely is the cost of such programs. Hence, among the challenges of enhancing clinical learning is financing the increased time commitments needed for key components such as collaboration, mentor training, and clinical supervision.

A second challenge is the reconceptualization of curriculum. Traditionally, we have defined curriculum as a series of courses with supporting clinical work designed to enhance candidates' understanding of course objectives. We are now being encouraged to flip our thinking and conceptualize curriculum as a series of carefully designed clinical experiences wrapped in coursework that focuses on the development of the knowledge, skills, and dispositions teacher candidates need to contribute in meaningful ways to the learning needs of K-12 students at specific school sites. Designing standards-based curricula grounded in clinical experiences and attuned to the learning needs of students at different school sites challenges the ways we are accustomed to thinking about curriculum, instruction, and assessment.

Of interest, current conceptualizations of clinical learning and accompanying challenges harken back to the educational reform movement of the mid-1800s, the early normal schools, and the close connection between the needs of specific schools or school systems and the teacher preparation curriculum. More than 150 years later, calls to transform teacher education resonate with a similar but now more sophisticated understanding of clinical learning. Preparation programs focused on enhancing the learning of all students require partnerships that value wide participation in decision making, that are accepting of intellectual debate and critique as well as consensus building, that engage participants in probing and problem-solving conversation, and that function in an assessment and accountability system that encourages improvement rather than narrowing curriculum and gaming the system to minimize or avoid punitive, dysfunctional results. In short, the partnerships must sustain a professionalizing stance that empowers and supports teachers, teacher educators, school leaders, parents, and the broader community in a shared commitment to successful student learning as the core mission of public schools in a democracy.

AUTHOR BIOS

Betty Lou Whitford, Ph.D., is the Dean of the College of Education at Auburn University and Wayne T. Smith Distinguished Professor. She has nationally recognized expertise in the foundations of education, educational policy, social studies education, and professional development schools and partnerships between universities and P-12 education.

Susan Kidd Villaume, Ph.D., is the Associate Dean for Academic Affairs and Certification Officer in the College of Education at Auburn University. Her research interests focus on studying the key components of highly effective teachers.

REFERENCES

Angus, D. L. (2001). *Professionalism and the public good: A brief history of teacher certification.* Washington, DC: Thomas B. Fordham Foundation.

Ball, D., & Forzani, F. (2009). The work of teaching and the challenge for teacher education. *Journal of Teacher Education*, 60, 497–510.

Berman, P., & McLaughlin, M. W. (1978). *Federal programs supporting educational change, Vol. VIII: Implementing and sustaining innovations.* Santa Monica, CA: Rand.

Blythe, T., Allen, D., & Powell, B. S. (1999). *Looking together at student work: A companion guide to assessing student learning.* New York, NY: Teachers College Press.

Carnegie Forum on Education and the Economy. (1986). *A nation prepared: Teachers for the 21st century.* Washington, DC: Author.

Costa, A., & Garmston, R. (1985). Supervision for intelligent teaching. *Educational Leadership*, 42(5), 70–80.

Council for the Accreditation of Educator Preparation. (2013, August 9). *CAEP Accreditation Standards.* CAEP. Retrieved from http://caepnet.files.wordpress.com/2013/09/final_board_approved1.pdf

Council of Chief State School Officers. (2011, April). *Interstate Teacher Assessment and Support Consortium (INTASC) model core teaching standards: A resource for state dialogue.* Washington, DC: Author.

Darling-Hammond, L. (2006). Constructing 21st century teacher education. *Journal of Teacher Education*, 57, 300–314.

de Leon, A. G. (2003). After 20 years of educational reform, progress, but plenty of unfinished business. *Carnegie Results*, 1(3).

Edelfelt, R. A., & Raths, J. D. (1999). *A brief history of standards in teacher education.* Reston, VA: Association of Teacher Educators.

Fernandez, C., & Chokshi, S. (2002). A practical guide to translating lesson study for a US setting. *Phi Delta Kappan*, 84, 128–134.

Flexner, A. (1910). *The Flexner report on medical education in the United States and Canada 1910.* New York, NY: Carnegie Foundation.

Gage, N. L. (1978). *The scientific basis of the art of teaching.* New York, NY: Teachers College Press.

Goodlad, J. I. (1984). *A place called school: Prospects for the future.* New York, NY: McGraw-Hill.

Goodlad, J. I. (1990). *Teachers for our nation's schools.* San Francisco, CA: Jossey-Bass.

Grossman, P. (2010). *Learning to practice: The design of clinical experience.* Washington, DC. American Association of Colleges for Teacher Education.

Hammerness, K., & Darling-Hammond, L. (2005). The design of teacher education programs. In L. Darling-Hammond & J. Bransford (Eds.), *Preparing teachers for a changing world: What teachers should learn and be able to do* (pp. 390–441). San Francisco, CA: Jossey-Bass.

The Holmes Group. (1986). *Tomorrow's teachers.* East Lansing, MI: Author.

Labaree, D. F. (2008). An uneasy relationship: The history of teacher education in the university. In M. Cochran-Smith, S. Feiman-Nemser, & D. J. McIntyre (Eds.), *Handbook of research on teacher education: Enduring issues in changing contexts* (3rd ed., pp. 290–306). Washington, DC: Association of Teacher Educators.

Lampert, M. (2010). Learning teaching in, from, and for practice: What do we mean? *Journal of Teacher Education*, 61, 21–34.

Lauter, N. (Ed.). (1998). *Professional development schools: Confronting realities.* New York: National Center for Restructuring Education, Schools, and Teaching.

Lortie, D.C. (1975). *Schoolteacher: A sociological study.* Chicago, IL: University of Chicago Press.

National Commission on Excellence in Education. (1983). *A nation at risk.* Washington, DC: US Department of Education.

National Council for the Accreditation of Teacher Education. (2001). *Standards for professional development schools.* Washington, DC: Author.

National Council for the Accreditation of Teacher Education. (2010). *Transforming teacher education through clinical practice: A national strategy to prepare effective teachers. Report of the Blue Ribbon Panel on Clinical Preparation and Partnerships for Improved Student Learning.* Washington, DC: Author.

Ronfeldt, M. (2012). Where should student teachers learn to teach? Effects of field placement school characteristics on teacher retention and effectiveness. *Educational Evaluation and Policy Analysis*, 34, 3–26.

Sarason, S. B. (1971). *The culture of the school and the problem of change.* Boston, MA: Allyn and Bacon.

Schlechty, P. C. (1976). *Teaching and social behavior: Toward an organizational theory of instruction.* Boston, MA: Allyn and Bacon.

Schlechty, P. C., & Vance, V. S. (1981). Do academically able teachers leave teaching? The North Carolina case. *The Phi Delta Kappan*, 63(2), 106 ff.

Shulman, L. S. (1996). Just in case: Reflections on learning from experience. In K. T. J. Colbert & P. Desberg (Eds.), *The case for education: Contemporary approaches for using case methods* (pp. 197–217). Boston, MA: Allyn & Bacon.

Sykes, G. (1992). *Teacher licensure and certification.* In M. C. Alkin (Ed.), *Encyclopedia of educational research* (6th ed., pp. 1352–1359). New York, NY: Macmillan.

von Zastrow, C. (2009, September 8). Breaking new ground in teacher education. A conversation with teacher educator Nancy Bacharach. *Learning First Alliance.* Retrieved from http://www.learningfirst.org/visionaries/NancyBacharach

Whitford, B. L., & Metcalf-Turner, P. (1999). Of promises and unresolved puzzles: Reforming teacher education with professional development schools. In G. A. Griffin (Ed.), *The education of teachers, Ninety-eighth yearbook of the National Society for the Study of Education, Part I* (pp. 257–278). Chicago, IL: University of Chicago Press.

Whitford, B. L., Ruscoe, G., & Fickel, L. (2000). Knitting it all together: Collaborative teacher education in Southern Maine. In L. Darling-Hammond (Ed.), *Studies of excellence in teacher education: Preparation at the graduate level* (pp. 173–257). Washington, DC: AACTE.

Wood, D. R., & Whitford, B. L. (2010). A look to the future. In B. L. Whitford & D. R. Wood (Eds.), *Teachers learning in community: Realities and possibilities* (pp. 167–179). Albany: State University of New York Press.

Yinger, R. J. (1999). The role of standards in teaching and teacher education. In G. A. Griffin (Ed.), *The education of teachers, Ninety-eighth yearbook of the National Society for the Study of Education, Part I* (pp. 85–113). Chicago, IL: University of Chicago Press.

Zeichner, K. (2010). Rethinking the connections between campus courses and field experiences in college- and university-based teacher education. *Journal of Teacher Education*, 61, 89–99.

Zeichner, K. (2012). The turn once again toward practice-based teacher education. *Journal of Teacher Education*, 63, 376–382.

Zeichner, K. M., & Tabachnick, B. R. (1981). Are the effects of university teacher education "washed out" by school experience? *Journal of Teacher Education*, 32, 7–11.

PEABODY JOURNAL OF EDUCATION, 89: 436–452, 2014
Copyright © Taylor & Francis Group, LLC
ISSN: 0161-956X print / 1532-7930 online
DOI: 10.1080/0161956X.2014.938591

Routledge
Taylor & Francis Group

The Challenges Never Stop! Two Decades of Reaching for the Best in Clinical Practice

Bruce E. Field and Irma J. Van Scoy
University of South Carolina

The University of South Carolina Professional Development School (USC PDS) Network has been engaged in designing and redesigning school–university partnerships for more than 20 years with a focus on ensuring that school-based practice lies at the heart of candidate preparation. In 2012–2013, the USC PDS Network once again reexamined their program design to identify and build upon those elements that have proven successful. This article shares the journey and lessons learned in the evolution of the USC PDS Network, including the results of the most recent reexamination. The focus is on challenges inherent in the creation of effective school–university collaboration and insights into key components of success, including relationship building, leadership and administrative support, sense of purpose, organizational structures, and adaptability to change.

INTRODUCTION

The National Council for Accreditation of Teacher Education (NCATE) in 2011 recognized the University of South Carolina (USC) "as a model of excellence in its commitment to and effectiveness in building strong partnerships for preparing quality educators and addressing P-12 school needs" (Fall 2001 section, para. 1). A significant component of the university's success in preparing quality educators has been its Professional Development School (PDS) Network, a collaboration with local schools that between 2009 and 2013 received four awards from the National Association for Professional Development Schools (NAPDS) for "Exemplary Professional Development School Achievement"—one for the Network as a whole and three for individual school sites. Although these accolades acknowledge the accomplishments of two decades of thoughtful school–university collaborations, they have been achieved in part because of the willingness of the P-20 partners to accept change as an essential component of our work. Throughout our 20-plus years of crafting meaningful PDS partnerships, change has been a constant factor as we have addressed the challenges inherent in designing programs that not only enhance the clinical preparation of new educators but simultaneously help sustain those already in the field.

Bruce E. Field is now at the Department of Teaching and Learning, College of Education, Georgia Southern University.
Correspondence should be sent to Irma J. Van Scoy, Office of the Provost, University of South Carolina, Columbia, SC 29208. E-mail: ivanscoy@mailbox.sc.edu

THE EARLY YEARS (1990–2001)

USC began to create PDS in 1990 in the context of national movements by the Holmes Partnership (then the Holmes' Group), the National Network for Educational Renewal (NNER), and other initiatives advocating school–university collaboration for the improvement of schools and teacher education. University faculty and administrators began by inviting local schools to participate in conversations on what a PDS should be. The focus was on working *with* schools to create a definition of PDS based on Peter Senge's (1990) premise that

> if people don't have their own vision all they can do is sign up for someone else's. The result is compliance, never commitment. On the other hand people with a strong sense of personal direction can join together to create a powerful synergy toward what I/we truly want. (p. 211)

Over time, school- and university-based faculty and administrators agreed that becoming a USC PDS meant working toward key assumptions that define a PDS. These included

- building a community of learning;
- appreciating diversity and promoting social competence and justice;
- creating flexible and innovative organizational structures that support shared decision making;
- demonstrating essential good practice based on professional knowledge, including teaching for understanding;
- engaging in inquiry and reflection about teaching and learning; and
- providing high-quality clinical experiences.

As the USC PDS Network acted to put these ideas into practice, an operational definition of what it means to be a USC PDS was developed, including

- openness to curricular innovation and a commitment to professional renewal through participation in research, conferences, and coursework;
- university faculty involvement in the school through on-site courses, teaching of preK-12 students, and participation in curriculum development; and
- school involvement in initial teacher education through significant numbers of clinical placements, teacher/administrator roles in developing teacher education programs, and teaching and supervising teacher candidates.

Building on this operational definition of a PDS, the university's initial PDS Network consisted of 11 P-12 school sites which by 1996 grew to 17.

KEY COMPONENTS

Collaboration in the first 11 years of the Network focused on four key components, the first of which was shared supervision of teacher candidates. As noted by Harris and Harris (1995), a key to successful implementation of PDS is for school and university partners to really listen to one another and share in decision making. In a PDS, the relationship between school- and university-based faculty transforms to a focus on *shared* supervision and equal status. Both on-site teachers and university-based faculty members observe, conference, and guide teacher candidates. They reach consensus on the evaluation of teacher candidates rather than one's evaluation being more important than the other's. As summarized by Robinson and Darling-Hammond (1994), "Open dialogue about issues of practice allows colleagues to recognize each other's strengths and needs so that professional collaboration can occur" (p. 211).

The second key component of PDS collaboration in these early years was school–university action research and mutual professional development. Offering mini-grants for research projects was a successful way to involve school- and university-based faculty in inquiry and reflection about best practice. Small grants, typically $1,000 to $2,000, were given to teams consisting of a teacher, an education faculty member, and often an arts and sciences faculty member who agreed to investigate an area of teaching and learning of particular interest to them. Funds were often spent for curriculum materials but also provided stipends for teachers to participate in curriculum development or provided research equipment and supplies. Shared professional development included attending and presenting curricular innovations at local conferences and events.

The third key component was on-site university courses for teachers and teacher candidates. On-site courses for *teachers* provided a means for school and university faculties to engage in in-depth study and conversations related to best practice for both P-12 teaching and education. Courses included advanced study of disciplines (e.g., science, mathematics, and literacy), supervision of interns, and teacher as leader. Class meetings in schools saved time and expense for teachers and allowed the university faculty to be more familiar with the teachers' work environment. On-site courses for *teacher candidates* provided opportunities for teachers and children to enrich courses through demonstration lessons, small-group work, and guest lectures and for teachers to participate in class discussions and teacher candidate presentations. Benefits of on-site courses included building relationships, developing a common language, sharing resources, and increasing collaboration.

Collaboration through organizational structures and committees was the fourth key component in USC's PDS Network in these early years. A governance structure was created to provide a vehicle for school–university information sharing and decision making. A Coordinating Council oversaw standing committees on preservice teacher education, curriculum inquiry, technology, and conferences. Committee meetings were held primarily in schools at times convenient to and suggested by teachers and administrators. The Pre-service Committee was a particularly effective vehicle for collaborative decisions related to course content and clinical experiences. Beyond the formal PDS governance structure, school-based educators served regularly on university admissions and search committees and task forces for specific projects (e.g., the revision of clinical evaluation forms). University-based educators served on individual schools' PDS site councils and additional committees as requested.

INITIAL KEYS TO SUCCESS

Throughout the first 11 years of USC's PDS Network, three key factors helped build a partnership strong enough to be sustained through whatever obstacles it encountered: relationships, mission, and leadership.

Relationships

From the beginnings of the PDS movement, trust was frequently noted as a critical ingredient in building school–university relationships. After extensive analysis of successful school–university collaboration in two inner-city schools, Comer (1980) wrote, "I am told that what we did in the Baldwin and King Schools has been tried or exists elsewhere. So what is new or different? Only one thing: we established trust and mutual respect among participants" (p. 229). In a later discussion of his study, Comer (1995) summarized by saying, "Just as real estate is about 'location, location, location', educational change is about 'relationships, relationships, relationships.'"

Two types of relationships were critical in the success of USC's PDS Network: school–university relationships *within* an individual school and network relationships *across* schools and administrators at all levels. The PDSs that flourished in terms of teacher involvement and innovative programs were those with a sustained relationship (e.g., 4 or more years) between at least one university faculty member, one or more school administrators, and a core group of teachers. As described by one teacher,

> The avenue of trust was built on personal recognition and involvement. As the university supervisor worked with student teachers, she found ways of interacting with all faculty members. She did this by learning their names, areas of expertise, teaching styles, and offering assistance whenever the opportunity presented itself.

Communicating respect to teachers is important, given the generally perceived lower status of teachers versus professors. As stated by Comer (1980), "The rarely discussed but major and very powerful cause of school-university conflict is perceived differences in status among collaborators. Society does not grant public school careers status equal to university careers" (p. 214). Over time, the university faculty member just described taught lessons with children, offered preservice courses on-site, conducted collaborative research with teachers, and presented with them at national conferences. The teachers in the school took on significant roles as teacher educators and leaders in the PDS Network. This model of a core group of professionals working across settings in mutual respect and collaboration was repeated at numerous schools in the Network. Ongoing, consistent relationships were key to these developments.

Similarly, university and school faculties and administrators developed relationships with one another at Network meetings, shared courses, and opportunities for professional development. In the beginnings of the USC PDS development, a team of USC faculty, teachers, and administrators visited an established site at the University of Southern Maine. Participants were impressed with the collegial school–university relationships and the changing roles of school and university faculties they observed. Meanwhile, the trip also provided valuable opportunities for the traveling team to build relationships and share perspectives on PDSs.

Locally, the university offered a course on supervising interns to PDS faculty across schools, bringing together teachers from throughout the Network. The course was taught during the school day, with the university and the schools sharing expenses for substitute teacher pay to release teachers to take the course. This provided time for in-depth discussions about teacher education that weren't squished into hectic school days or taking place after school when everyone was too tired to think. Teachers taking the course had student teachers providing continuity to the children during teachers' class time. The course provided an opportunity for teachers to share successes and frustrations with colleagues in other emerging PDSs. Their rich discussions and their learning about the national PDS movement helped teachers see themselves as part of a larger mission. Teachers contributed to and caught "the positive contagion required to mobilize change" (Fullan, 1993, p. 31).

Network building was not a steady, upward path. Disagreements arose over what could and should be done, but positive relationships remained key to moving forward. One university faculty member stated,

> Although someone might not like or agree with a particular event, most trusted that their colleagues shared a dedication to the best interests of children and teachers and were doing their best. We forgave one another for mistakes. We reminded one another of the greater good.

MEANINGFUL MISSION

The second key to the early success of USC's PDS Network was the crafting of a *meaningful mission*. Teachers, administrators, and university faculty shared a common interest in providing increasingly better educational experiences for children. The school–university connection provided meaningful opportunities for members of all three groups to impact the education of children by improving teacher education, improving their own instruction, and supporting the development of best practice among their colleagues. We found that educators *chose* to invest time and effort in renewal as long as their efforts were perceived as making a difference.

Many teachers supported the PDS effort because they were enthusiastic about the opportunity to impact future teachers. As one teacher said in a speech after our journey was well under way,

> PDS changed my life and the lives of all the teachers at Hood Street. As I speak, 9 student teachers, 4 junior block students, and 50 practicum students are coming and going from our 14-classroom school. . . . We have all become teacher educators.

Although a number of teachers had spoken at university classes and worked with interns before the idea of PDS, as PDS faculty they moved beyond the label "cooperating teachers." They became course instructors, seminar leaders, and *coaching* teachers. They made decisions about how beginning teachers are prepared.

Development of best practice in P-12 education is also central to the PDS mission, but it can be a sensitive issue. Who knows best practice—university researchers, experienced classroom teachers, or school administrators? Do they all have something to offer? What seemed critical was for everyone to respect the diversity of views on teaching and learning that existed in a school. With this underlying respect, people accepted others at different points of development in teaching and learning. Opportunities for investigating teaching practices through coursework, interns' inquiry projects, and collaborative grants were embraced in large part because educators could see changes making a difference for students. Some were enthused about the opportunities for their own students, and others were focused on sharing results more broadly, but they all shared a passion for improving education. Working in a PDS provided a rewarding balance for university education faculty (all former teachers) who found that PDSs enabled them to remain connected to students, teachers, and schools, an important aspect of their work.

Leadership

As stated by Harris and Harris (1995), "Leaders do not need to be appointed. Any participant in a partner school may emerge as a leader when a need is discerned and ideas are generated to meet it" (p. 133). Many teachers, administrators, and faculty were providing leadership in the development of PDSs by working collaboratively to solve problems, trying new approaches (e.g., an innovative teaching technique, a shared model of supervision), and encouraging colleagues to participate.

By fall 1993, the university and its PDSs were ready to launch a formal new role, "clinical adjunct," for teacher-leaders who supported teacher candidates in schools. The position, which included a $500 stipend, involved being "chief worrier" for teacher candidates in the school, serving as liaison between the university and the school, and participating in supervision of interns. Clinical adjunct duties were loosely defined so that each PDS and its university partner faculty could develop the role in a way that worked best for them. For a number of teacher-leaders, the work that had begun out of professional interest and commitment now had a title.

Clinical adjuncts provided a critical link between teachers and the university, interpreting and negotiating for both sides. By attending meetings with other clinical adjuncts (formally, the Pre-service Committee of the PDS governance structure), they learned new strategies for making the school–university connection. For example, the practice spread of holding receptions for all faculty in a school to welcome interns. Introductory receptions became part of the message to teacher candidates in PDSs: teaching and learning take place in the whole school and with everyone in it; we are all here to help and learn together.

Additional roles for teacher leaders soon materialized, including *practicum instructor*, a paid position as instructor of record (including grading assignments) for a cohort of students in an initial practicum course. This role was particularly significant in that it was tied to credit-bearing experiences with tuition to pay school-based instructors for their role. A course coordinator communicated with all practicum instructors and coordinated their efforts. The use of practicum instructors institutionalized a system for recognizing and supporting these teacher-leaders.

Creating a school–university partnership "must ultimately be channeled and directed by leadership at the higher levels of school administration" (Harris & Harris, 1995, p. 133). The support of principals and superintendents was critical in keeping the PDS agenda moving forward. The Network's PDS administrators saw working with the university as excellent professional development for the faculty and improved education for students. They supported participation of teacher candidates by accepting as many as possible, seeking resources to support them, and including them fully in the life of the school and district. They welcomed university faculty in the school, making time to meet with them and paving the way for them with parents and others. One principal wrote,

> Being a PDS school has been most beneficial for us. We have met and worked closely with USC professors whom we probably would otherwise have never met. . . . We know that they are willing to teach a lesson, conduct a workshop, or help us with much needed research findings when we have the pressing need.

Providing information to administrators on the national teacher education agenda was important. One superintendent noted,

> I have talked about the Goodlad research with others and know that I can fully support continuance of the program–no reservations. . . . When I visit conferences, I can describe how we are on the cutting edge in terms of preparing teachers.

Principals also managed PDS efforts among all the other school initiatives and demands and sometimes shielded teachers from overload. Some principals rose to the occasion by having the "strength to be weak" (Levine & Trachtman, 1997, p. 82). That is, sharing power and supporting their teachers in assuming leadership roles. As one superintendent put it, "Our principals have acquired the ability to turn people loose—they don't have to control everything. Everyone is more effective."

University- and school-based faculty and administrators also assumed leadership roles at state, local, and national levels. A number of USC faculty and their school-based partners were involved in the work of the Holmes Partnership, the National Network for Educational Renewal, and other associations supporting partnership work. University- and school-based faculty copresented the results of their work at local, state, and national conferences.

The balance of leadership and overall progress in the PDS Network illustrated Michael Fullan's principle that "individualism and collectivism must have equal power" (Fullan, 1993, p. 33). It took the ideas and actions of strong individuals to create a PDS. Leaders in the movement were excited about their *own* ideas on working together to improve teacher education and school curriculum. They spent hours planning, meeting, and doing, in part because of the "flow" they experienced from their involvement (Csikszentmihalyi, 2008). However, it was also the support and reinforcement they received from their colleagues at the school and university, in the greater PDS Network, and at the national level that carried them forward.

Although great progress was made in these early years of the USC PDS Network, there were noteworthy challenges. Over time, there was significant change in leadership in schools, districts, and at the university. In one dramatic case, a change in school leadership led to significant teacher turnover, and the school ultimately withdrew as a PDS. However, most cases demonstrated tremendous resilience in individual schools and the Network as a whole. If a key university faculty member left a well-established PDS, the teachers and administrators were so ensconced in PDS work that they continued their relationship and work with teacher educator programs although they were receiving less direct support. This often worked out over time when a new faculty member established a relationship with the school. Similarly, the Network continued to function even when the College of Education went $3\frac{1}{2}$ years with three different interim deans and the loss of other key PDS advocates in the dean's office. Faculty who were dedicated to the Network worked with school partners to maintain the committee structure and sustain established PDSs. The PDS movement was such a major part of the university that toward the end of these early years a new leadership role was established in the College of Education by transforming a clinical placement position into a role with greater responsibility for nurturing partnerships. This new Executive Director for School–University Partnerships and Clinical Experiences was charged not only with overseeing the placement of education candidates in the schools but also maintaining the university's relationship with local schools, including oversight of the PDS Network. This was yet another positive step in the early years toward institutionalizing partnership work.

GROWTH AND CHANGE (2001–2012)

As the 2000–2001 academic year drew to a close, the vibrancy of USC's PDS Network was clearly apparent. Many school-based colleagues were working hand-in-hand with USC faculty in the South Carolina Reading Initiative; others were busily preparing Teacher Quality grant proposals, whereas still others were eagerly anticipating a team-taught course offered by a USC faculty member and a PDS second-grade teacher to help early childhood and elementary teachers support teacher candidates' development of an inquiry stance toward teaching and learning. Curricular conversations were winding down at one PDS site; another was basking in the glow of having just received both the National Blue Ribbon for Excellence Award and the National Blue Ribbon Special Emphasis Award for Technology, and plans were under way for kicking off the new academic year with a PDS Leadership Academy focusing, in part, on bringing arts and sciences faculty more fully into the PDS partnership.

CONTINUOUS ASSESSMENT

At the same time, the need for change was apparent throughout USC's PDS Network as its executive director announced her retirement and a new Dean of the College of Education ended his 1st year in South Carolina by challenging USC faculty and P-12 school partners to rethink the mission of the partnership. "What," he asked, "should teacher education be all about? Where do we want to go with this partnership? Where do we want to be in five years, ten years, or twenty years? And how do we get there?" His challenge was echoed by a high school PDS principal who urged her faculty to "have more collective dialogue" and to "share our ideas, frustrations, successes, and strategies so that we may work more as a team and less as isolated individuals." These and similar challenges led to the development of a PDS Restructuring Committee that in spring 2001 began looking at a wide range of possibilities for both how we wanted to operate and what we hoped to accomplish. At stake was the challenge of sustaining the momentum of the Network, particularly as personnel shifts depleted the ranks of individuals experienced in and knowledgeable of the work of PDS and as the Network faced the reality of maintaining a heightened level of enthusiasm among those individuals who had worked so diligently through the years for the success of the PDS model.

The hiring of a new Executive Director of School–University Partnerships and Clinical Experiences in September 2001 coincided with the publication of the NCATE PDS Standards (NCATE, 2001) and provided an opportunity to use that document as a tool for examining possibilities posed by the Restructuring Committee and addressing the dean's challenge to re-think the mission of USC's PDS Network. The NCATE Standards offered a template through which PDS partnerships could examine their work in relation to over two hundred descriptors and ultimately rate the developmental stage of their collaborations. This document represented the first nationwide attempt to address the question that had been at the heart of USC's initial entry into the PDS world: What does it mean to be a PDS? USC's PDS Coordinating Council asked all 17 PDS sites to conduct self-studies based on the new standards and to use their self-studies to design action plans for the immediate future. This time-consuming process was completed in April 2002, and a seven-member Network Report Committee, comprised of university and P-12 school faculty, then spent 5 months analyzing the data to identify common themes across the various reports. In

September 2002, committee members shared with the Network their collective recommendations for moving the partnership forward. These included

1. clarifying our mission as a PDS;
2. identifying appropriate human and financial resources essential to the continuation of the partnership;
3. designing formalized, written agreements detailing the obligations of each partner in the collaboration;
4. reexamining the governance and committee structures with an eye toward increased efficiency;
5. designing a tool to assess the benefits of PDS participation for students (particularly diverse learners), teacher candidates, and faculty at both the P-12 and university levels; and
6. providing training in the meaning and use of "inquiry" so that it can take a more prominent place in the teaching and learning activities of all partner sites.

One of the strengths of the USC PDS Network has been its ability to maintain focus and move forward even when presented with challenges that could otherwise cripple its efforts. As multiple groups tackled the Network Report Committee's various recommendations, the everyday work of preparing future educators and providing professional development for current educators went on.

Maintaining Momentum While Making Changes

Funded by both a Network seed grants project and a federally funded partnership initiative, teams launched 27 school–university collaborations into inquiry, research, and practice. They then shared their results with the Network as a whole in a 2002 issue of *PDS Proceedings*, the Network newsletter. We also collectively prepared for our fall 2003 NCATE accreditation visit by operationalizing our revised Conceptual Framework, planning school visits for our NCATE evaluators, and crafting poster sessions highlighting the work of our PDSs as an integral component of the university's Professional Education Unit. Because of our commitment to the National Network for Educational Renewal's "Agenda for Education in a Democracy," we facilitated two NNER Leadership Associates training sessions in spring 2003 and fall 2004 for USC PDS practitioners, as well as for school–university partners across South Carolina. Both sessions reinforced the overall goals of the USC PDS Network by challenging participants to respond to such questions as, "What does it mean to be educated in a democratic society?" "How can we promote civic virtue in the schools?" and "What are the obstacles to producing democratic character?" We discussed answers to these and a host of other questions at a well-attended January 2005 USC Inquiry Expo held in downtown Columbia, where our PDS sites shared the unique aspects of their work with the local community.

The task of redesigning the USC PDS Network went on simultaneously with these various projects, and by spring of 2003 we had successfully rewritten the Network's mission statement to more succinctly reflect what we do in preparing all learners for educational growth: "To prepare all learners for the future, the USC PDS Network promotes best educational practices, meaningful collaboration, and democratic ideals." To accomplish this mission, we committed ourselves to

(a) support P-12 school communities as they actively engage teacher candidates in preparing for the profession, (b) provide ongoing professional development to sustain current educators in the profession, (c) collaborate across the P-20 educational continuum in examining and sharing deliberate investigations of practice, and (d) integrate the principles of the National Network for Educational Renewal's "Agenda for Education in a Democracy" throughout our collaborative community.

By the end of 2003 we revamped the Network's communication framework to simplify the organizational flow of information and decision making and clarify the roles of four standing committees: Curriculum/Inquiry as a venue for sharing teaching and learning practices across the Network, Technology as a venue for sharing technology practices across the Network, Advocacy as a venue for discussing current educational issues relevant to the Network and for engaging the broader community in an examination of those issues, and Pre-service as a venue for discussing the university's professional education programs and offering suggestions for the refinement of those programs. We instantly charged the Pre-service Committee with a number of tasks, including revising the evaluation forms used in assessing clinical experiences and revisiting a best practices manual drafted the previous year for the early childhood and elementary programs.

We made little immediate progress in addressing the two recommendations that we "design a tool to assess the benefits of PDS participation" and "provide training in the meaning and use of inquiry." Instead, we delayed discussion of those topics and focused our efforts on the two tasks we felt needed our greatest attention in terms of the day-to-day operations of the Network: "identifying appropriate human and financial resources essential to the continuation of the partnership" and "designing formalized, written agreements detailing the obligations of each partner in the collaboration." Addressing these two proposals had the potential to present a major shift in operating procedures requiring extensive conversations between the university and the local school districts with whom we had successfully partnered for years.

As if those pending conversations weren't sufficiently daunting, we faced yet another major challenge in 2005 with the reintroduction to the USC campus of undergraduate initial teacher certification programs in early childhood and elementary education and the birth of a stand-alone undergraduate program in middle-level education. The College of Education launched all three programs in fall 2005, with seven middle level, 22 elementary level, and 25 early childhood level candidates joining the roughly 200 graduate-level candidates pursuing teaching careers. Those undergraduate numbers would more than triple within 5 years, making our collaboration with local school districts an even more critical component of USC's clinically based teacher preparation programs and our discussions with those districts about sharing financial resources and formalizing written agreements even more essential to our continued success.

PARTNERSHIP WITH INVESTMENT FROM ALL: A NEW AGREEMENT

Since its inception in 1990, USC's PDS relationship with Columbia-area schools had been based in large measure on relationships developed between members of USC's faculty and teachers and administrators in particular local schools, with the individuals involved sharing a common vision of teaching and learning. Those relationships had led to the initial structure of the Network, which, among other key elements, included formal PDS Partnership Agreements. While the agreements were formal in nature, requiring the signatures of deans, superintendents, and principals, they only generally described the specifics of each partnership. The one-page, 200-word document obligated individuals involved to "work as partners toward the simultaneous renewal of both institutions through their involvement with the education of educators" and to "agree to the commitment levels required for this partnership and support the assumptions underlying those commitments." The partners also agreed to "strive toward full implementation of the assumptions underlying the Professional Development School concept" and identified those five assumptions as follows:

1. Promote excellence and quality for the profession and for all learners within the partnership through regularly scheduled professional development activities and work toward nationally recognized standards of excellence;
2. Participate in a shared governance structure at the school level and through the PDS coordinating council;
3. Base the agreement on support from faculty and administration at both institutions;
4. Seek opportunities to foster the development of partnership goals with financial and human resources; and
5. Ongoing professional renewal and a willingness to engage in collaborative inquiry and innovation premised upon a sound knowledge base and best practice associated with the profession.

This generally worded agreement had served the Network well for more than a dozen years. But as initial relationships faded due to personnel turnover or to USC faculty moving on to other professional agendas, and as USC's teacher preparation programs grew exponentially, the recommendations offered by the 2002 Network Report Committee brought into clear focus the need for an updated, more detailed, agreement between USC and its local PDS partners.

Discussions about crafting a new agreement began in earnest at the end of the 2003–2004 academic year when the Coordinating Council cochairs took the lead in drafting a revised document. With the launching of the new undergraduate programs quickly approaching, the Dean of Education asked this group to come up with a plan that would both clarify the ever-present question of what it means to be a PDS and offer recommendations for expanding the number of area schools that would serve as clinical sites for USC's teacher candidates. Implicit in his request was the understanding that there is a distinction between being a PDS and being a school site that works with teacher candidates. That distinction proved pivotal in the redesign.

Working through the summer and into the fall of 2004, the cochairs finalized a draft of "Renewing USC's Relationship with P-12 Schools" which they presented at the October meeting of the Coordinating Council. The proposal offered local schools the option of collaborating with USC in one of two ways: as a Partnership Site or as a PDS. Schools electing the Partnership Site role would provide placements for USC education candidates and offer those candidates opportunities to work with P-12 students to develop their teaching skills. Benefits for Partnership Sites would include tuition reduction credits at the university for coaching teachers who mentored full-time candidates, staff development through involvement with teacher candidates (including serving as models for teacher candidates, developing observation and supervisory skills, and having access to information regarding current research and practice), enhanced student-staff ratios resulting from the involvement of education candidates, firsthand observation of potential candidates for openings at the school, and enhanced access to the university for staff development needs.

Sites applying to become PDS would also provide quality placements for education candidates but would move to more involved relationships with the university centering upon professional development opportunities for P-12 teachers, collaborative examinations of best practice and other current issues in education, and a stronger voice for school-based faculty and administrators in the university's educator preparation programs. The school's faculty and staff would become, in essence, an extension of the university itself and would, through the signing of a formal 3-year contract between the university and the school district, benefit from the collaboration through

- the assistance of a designated USC Liaison who would work with the school no less than 15 hr a week supervising USC education candidates and serving as a support person for the school's professional development activities;
- free leadership training for school faculty and administrators related to the NNER's Agenda for Education in a Democracy;
- at least one free, on-site professional development course or other professional development experience per 3-year contractual cycle, with the topic determined by the school;
- collaboration with a USC faculty member on at least one research or demonstration project per each three-year contractual cycle;
- priority consideration for participation in practicum and internship experiences, including paid roles for school-based faculty;
- priority consideration in hosting on-site courses for education candidates that provide enrichment experiences for children and professional development opportunities for teachers;
- priority consideration for grant-funded initiatives and teaching assignments at USC;
- the banking of tuition reduction credits for use not only by coaching teachers but also by other faculty and staff;
- opportunities to serve on USC committees to represent the P-12 perspective and share in decision-making regarding education programs and faculty searches; and
- financial support to attend the annual PDS National Conference and other similar events.

Because of the extensive benefits of becoming a member of USC's PDS Network, the proposal called on schools/districts to make a number of commitments in order to be designated as a PDS. These included

- a demonstrated emphasis on inquiry-based teaching and learning;
- the presence of a critical mass of faculty willing to work with USC education candidates;
- the provision of a dedicated physical space within the school for use by the USC Liaison;
- the assignment of a P-12 faculty member or administrator as the site's Clinical Adjunct responsible for collaborating with the USC Liaison in guiding PDS initiatives;
- hosting, whenever possible, USC education courses on-site;
- active participation in the Network's governance structure; and
- payment of $7,000 annually to fund 50% of the USC Liaison and Clinical Adjunct stipends.

This final expectation, that the school/district would help fund the PDS initiative, was a clear departure from previous practice and, not surprisingly, generated animated commentary as the Coordinating Council fine-tuned the proposal in the ensuing months. Some representatives pointed out that less financially secure districts might be at a disadvantage because they did not have the resources to support PDS funding. Others wondered whether any district could afford a 3-year financial commitment, whereas others questioned whether being a Partnership Site, as opposed to being a PDS, would be seen as a type of second-class citizenship. After months of in-depth conversation, the Coordinating Council forwarded a slightly modified "Renewing USC's

Relationship with P-12 Schools" proposal to the Dean of Education, who then arranged a January 2005 meeting between representatives of his office, the college's Department of Instruction and Teacher Education, and the Executive Director of School–University Partnerships and Clinical Experiences with local superintendents to discuss the proposal. The USC contingent walked into the meeting not knowing what reaction to expect from the districts but walked out with the full blessing of all but one superintendent to move forward with the plan. The superintendents' overall consensus was that the university had been doing a terrific job through the years of preparing future educators and the district funds being requested to support continuation of that critical imperative—and to support in a broader sense the professionalization of their current faculty and staff—were more than reasonable.

THE NEW PLAN IN ACTION

Given the green light to proceed, the Executive Director of the PDS Network in April 2005 shared the "Renewing USC's Relationship with P-12 Schools" materials with all Columbia-area public schools, inviting them to become involved with the university's educator preparation programs as either Partnership Sites or as PDSs. In explaining the difference between the two, he wrote,

> While the expectations for both are high, the degree of involvement between the school and the university is much more intense with a PDS than with a Partnership Site. In a nutshell, a Partnership Site is a school primarily interested in working with prospective educators, while a PDS focuses not only on that endeavor but also on collaborative professional development for experienced P-12 faculty. In a world of limited resources, the intensity of the Professional Development School relationship dictates that the university will be restricted in the number of PDS relationships we can establish. So while I am sending you a PDS application and inviting you to apply, I also encourage you to express an interest in being a Partnership Site. With the expansion of our teacher preparation programs, we will undoubtedly require a significant number of such sites. Taking on that role may, in fact, serve as a means for your school and USC to learn about each other and help each of us decide if we eventually may want to pursue the more intense PDS relationship.

Dozens of schools, most of which had been hosting USC education candidates for years, expressed interest in serving as Partnership Sites. Twenty schools, including 10 of the existing 17 PDS sites, applied to become part of the new PDS Network, and half of them, including seven of the original members, were accepted. The new Network, therefore, consisted of seven experienced PDS sites and three brand-new settings; they were joined 2 years later by two other brand-new sites and another 3 years later by yet another new school, bringing to 13 the number of participants in a redesigned Network involving more clearly delineated roles and responsibilities, shared financial contributions, and a clear commitment to the redesigned mission statement and four-part agenda.

The work of the redesigned Network from 2005 through 2012 rivaled the success of the Network's early years. With the added benefit of a permanent university presence on site for no less than 15 hr a week, the 13 PDS sites made great strides not only in better serving USC education candidates but also in growing the profession in a variety of creative ways. One high school PDS worked closely with its USC Liaison to implement a "jump start" program bringing together on a monthly basis 1st- and 2nd-year teachers, USC education candidates, and veteran teachers for guided conversations about the transition from the university to the classroom. One elementary PDS spent 3 years examining the question, "If teachers become better writers, will our students become better writers?" and produced quantitative data to answer with an emphatic "yes." Another elementary PDS leaned heavily on a USC science education faculty member to enhance the confidence level of teachers in teaching science, whereas yet another mirrored the medical school "rounds" model by offering USC education candidates the opportunity to observe a variety of teaching strategies in its annual Celebration of Teaching, an all-day event in which candidates rotated through classrooms and then debriefed with the school's teachers in an after-school conversation in the media center.

The redesigned Network continued many of the best PDS practices of the early years by advocating for curricular innovation, accepting the obligation to grow in tandem both education candidates and current educators alike, carrying conversations about best practice into actual classrooms through on-site courses, and blurring the distinction between P-12 and university faculty by encouraging cross-campus collaboration. P-12 faculty played significant roles in the development of the university's programs by helping design teacher candidate dispositions, serving on committees charged with assessing the effectiveness of programs, teaching university courses, and assisting in the faculty hiring process. They also have opened their doors on a regular basis to visitors from other states interested in learning more about the work of the USC's PDS Network.

Out-of-state visitors are a reflection of the increasingly visible role that USC has played in the national PDS initiative. For 16 consecutive years USC has been the chief organizer of the annual PDS National Conference, at first in collaboration with the Holmes Partnership and since 2005 in collaboration with the NAPDS. This event, which typically attracts 1,000 PDS advocates from across the United States and the world, is the primary forum for discussions of everything PDS and has included as featured speakers such notables as Linda Darling-Hammond, Alfie Kohn, Lee Teitel, and Ken Zeichner. The success of the annual event led to the debut of the NAPDS, a project which began with USC-hosted discussions in Columbia in 2003 and culminated in the official launching of the association in 2005. As the only national organization dedicated solely to PDSs, the NAPDS has in its 10-year existence begun a successful peer-reviewed journal (*School-University Partnerships*), increased the national PDS dialogue through its website (napds.org) and magazine (*PDS Partners*), and revisited the long-standing question of what it means to be a PDS by offering as an alternative to the NCATE PDS Standards its own Nine Essentials of PDS Work (Brindley, Field, & Lessen, 2008).

PDS colleagues from USC share their work on a regular basis at the annual PDS National Conference, but they also recognize the importance of generating and leading discussions about local, state, and national education issues in their home city. Coordinating Council meetings have for years included discussions of "hot topic" items such as school report cards, changing teacher certification requirements, adequate yearly progress, the state's education budget, the role of the state's School Improvement Councils, teacher assessment systems, and most recently Common Core State Standards. Beyond these "internal" conversations, the Network's Advocacy Committee was the primary sponsor for three city-wide public forums between 2006 and 2010—one on public education in general, one on school choice (a seemingly never-ending topic in South Carolina), and one as a conversation among primary election candidates for both state governor and state superintendent of education. The Network's dedication to the public debate of education-based issues is one more example of its foundational belief that aspiring and established educators alike can play a powerful role in determining the future of education in the United States.

THE PRESENT

Despite its success in preparing new educators, sustaining educators already in the field, and leading local and national conversations about the state of American education, USC's PDS Network has continued to face challenges. Whereas the new structures and contracts initiated in 2005 helped the Network grow, economic realities and the demands of academia presented another series of challenges to the Network as 2011 eased into 2012. Caught in the financial downturn of the times, two districts decided they could no longer afford the $7,000 annual fee and subsequently withdrew their three schools from the Network, adjusting their roles to Partnership Site status. At the same time, it became increasingly difficult to find USC faculty available to take on the role of USC Liaison as they faced increasing demands on their time. These realities led to a "State of the Network" address at the January 2012 Coordinating Council meeting in which the PDS Executive Director asked how well the Network has met the four goals established in 2005 and how well the structures put in place to support those goals have worked.

In terms of the four overarching goals, no one doubts that the university's PDS Network has more than met its own expectations in terms of its first goal, preparing new educators for the profession. PDS sites have been a model of consistency in working side-by-side with university faculty in coaching candidates and giving them a realistic understanding of what schools and schooling are all about. This degree of success has not been matched across Goals 2 and 3, as both professional development for current educators and collaborative investigations of best practice have been inconsistent across Network sites. The university has not always been able to identify sufficient resources to offer courses or other professional development experiences for all PDS sites, and the schools themselves have not always reached out to request such assistance. Three of the 10 sites have successfully connected with university faculty in significant research studies, but for the most part, the goal of creating an ongoing community of engaged scholarship has fallen short of expectations. Meeting our revised mission statement's fourth goal, integrating the principles of the National Network for Educational Renewal's "Agenda for Education in a Democracy" throughout our collaborative community, has met with a greater degree of success than Goals 2 and 3, but it has occurred not out of any intentional design on our part but instead because the NNER principles are accepted across the Network as what all good schools should be doing. In other words, we were meeting the goal more by accident than by design.

Our success rate with the structures we put in place to support our redesigned Network has also been a mixed bag. Mirroring our success in preparing new educators for the profession have been the impressive contributions made to that task by our school-based clinical adjuncts who have consistently helped integrate education candidates into their respective school sites. Our Coordinating Council meetings have also been a structural success, as they have continued to serve as our best avenue for meaningful cross-Network communication. That said, the usefulness of the Network's four standing committees has come into question, so these groups now meet only on an as needed basis. Our other previously useful communication tool, the Network newsletter, fell by the wayside when the College of Education staff member responsible for designing and distributing the newsletter retired and was not replaced, due to financial constraints. Loss of this position also negatively impacted the updating of the Office of School-University Partnerships and Clinical Experiences' website.

The most daunting challenge we have faced in recent years is the previously mentioned difficulty in finding USC faculty to take on the role of USC Liaison. Along with the Clinical

Adjunct position, the USC Liaison serves as the lynchpin of the PDS collaboration and, most important, provides a direct link between the university and the school. We considered it a major accomplishment in 2005 when the College of Education leadership wholeheartedly supported the position of USC Liaison as a recognized and rewarded role for both clinical and tenure-track faculty. However, as fewer USC faculty were able to take on this role, we eventually turned to retired educators more familiar with the schools than with the university to fill many of the USC Liaison positions. Although they are a talented and dedicated group of individuals who have done important work with our education candidates, they do not have the knowledge of the university that was intended when we created the Liaison position and so cannot contribute as well as USC faculty (or graduate students) in the realms of professional development and collaborative research. An interesting sidebar to this particular dilemma is that what has kept some USC faculty from taking on the role of USC Liaison at a PDS site has been their work in USC Partnership Sites. In fact, although the schools they work with have opted, for one reason or another, not to apply to become PDSs, the initiatives taking place at those schools are, in some cases, more PDS-like than what is taking place at some of our official PDS settings. The dual challenge we therefore face is how to simultaneously step up the PDS work at our already existing PDSs while convincing those non-PDS sites that have solid USC faculty connections of the benefits of joining the USC PDS Network.

Recent challenges led to another period of reflection and reexamination of the Network and to the development of a collaboratively designed plan for addressing those challenges. However, unlike the changes made in 2005, the new proposal (accepted and implemented in fall 2013) did not call for a major rewriting of PDS contracts or the implementation of anything startlingly new. Instead, it recognized that the structures we have successfully built over time are fundamentally sound and worth sustaining but were in need of slight modifications to make them more compatible with current realities. Recognizing the economic difficulties of the times, the school/district financial commitment was reduced from $7,000 per year to $5,000 per year while making more clear to schools, districts, and USC faculty the financial and professional benefits of PDS participation. To strengthen the direct ties between the university and each PDS, the revisions challenge school and university representatives to design creative ways to engage multiple partners across the P-20 continuum as an alternative to relying solely on a USC Liaison. They also charge the Office of School–University Partnerships and Clinical Experiences with crafting expanded professional development opportunities for the Network by way of regularly scheduled fall and summer workshops. Through these and other minor modifications, we hope to keep in place the organizational pillars that have sustained us through 20-plus years of collaborative engagement, introduce new elements to make us even stronger, and encourage individuals and schools who have not been a part of our past success to join us for what we anticipate as even greater success in the future.

LESSONS LEARNED

The USC's two decades of school–university partnership work have taught us a number of valuable lessons which can benefit both fledgling and experienced school–university collaborations. High on this list of lessons is the critical importance of relationship building and the inclusion of trust, mutual respect, and the acknowledgment of equal status across all levels of the partnership.

However, relationship building by itself will not ensure success if the collaboration does not have support from the top of the organizational structures involved; no PDS relationship can survive without unquestioned endorsements from deans; superintendents; and, perhaps most critically, building principals. Nor can a school–university collaboration thrive without a mutually agreed-upon sense of purpose and the building of sound structures and processes to support that purpose. Most important, however, sustaining a meaningful school–university partnership requires collective recognition of the fact that institutions change over time and that such changes are not an indication of organizational weakness but a symptom of institutional strength. The USC's PDS Network has thrived through the years because of its acceptance of this reality and its willingness to adapt to the changes and challenges inherent in collaborating across the sometimes contentious terrain of the P-20 educational continuum.

AUTHOR BIOS

Bruce E. Field, Ph.D., served as the Executive Director of School-University Partnerships and Clinical Experiences in the College of Education at the University of South Carolina from 2001 through 2014. He currently serves as the Department Chair of Teaching and Learning in the College of Education at Georgia Southern University.

Irma J. Van Scoy, Ph.D., is the Executive Director for the University of South Carolina's integrative learning initiative, USC Connect. She is the former Associate Dean of the College of Education and one of the original faculty leaders of USC's PDS Network. She has published numerous articles on teaching and teacher education.

REFERENCES

Brindley, R., Field, B., & Lessen, E. (2008). *What it means to be a professional development school.* Columbia, SC: National Association for Professional Development Schools.

Comer, J. P. (1980). *School power.* New York, NY: Free Press.

Comer, J. P. (1995). [School-University Collaboration]. Presentation at the NNER Leadership Associates Development Program Meeting, Seattle, WA.

Csikszentmihalyi, M. (2008). *Flow: The psychology of optimal experience.* New York, NY: Harper.

Fullan, M. (1993). *Change forces: Probing the depths of educational reform.* Philadelphia, PA: Routledge Falmer Press.

Harris, R. C., & Harris, M. F. (1995). Launching and sustaining a partner school. In R. T. Osguthorpe, R. C. Harris, M. F. Harris, & S. Black (Eds.), *Partner schools: Centers for educational renewal* (pp. 127–165). San Francisco, CA: Jossey-Bass.

Levine, M., & Trachtman, R. (1997). *Making professional development schools work: Politics, practice, and policy.* New York, NY: Teachers College Press.

National Council for Accreditation of Teacher Education (2001). *Standards for professional development schools.* Washington: National Council for Accreditation of Teacher Education.

National Council for Accreditation of Teacher Education. (2011). Stories from the field. Retrieved from http://www.ncate.org/Public/StoriesfromtheField/tabid/742/Default.aspx

Robinson, S. P., & Darling-Hammond, L. (1994). Change for collaboration and collaboration for change: Transforming teaching through school-university partnerships. In L. Darling-Hammond (Ed.), *Professional development schools: Schools for a developing profession* (pp. 203–219). New York, NY: Teachers College Press.

Senge, P. (1990). *The fifth discipline.* New York, NY: Doubleday.

PEABODY JOURNAL OF EDUCATION, 89: 453–465, 2014
Copyright © Taylor & Francis Group, LLC
ISSN: 0161-956X print / 1532-7930 online
DOI: 10.1080/0161956X.2014.938592

Routledge
Taylor & Francis Group

Schools as Clinics: Learning About Practice in Practice

Robin Hands and Yuhang Rong
University of Connecticut

The Neag School of Education at the University of Connecticut is committed to the intentionality of interweaving course work and practice in its 5-year teacher preparation program, the Integrated Bachelor's and Master's program. It offers a wide range of field experiences to teacher candidates. Teacher candidates enter the program at the beginning of their junior year and complete the program after they finish their 5th-year postgraduate master's degree studies. This article describes the program requirements and experiences. In essence, it intends to provide an illustration of the interwoven teacher education curriculum as promoted by Darling-Hammond and other scholars.

Isn't it a pleasure to study and practice what you have learned?—Confucius (551 B.C.–479 B.C., The Analects, 1.1)

THEORETICAL FRAMEWORK

New teacher preparation may be the key to systematic reform in public schools (Bransford, Darling-Hammond, & LePage, 2005), which is why it is vitally important that an intentional approach be taken in the shaping and augmenting of future educators' knowledge, skills, and dispositions. Further, Hammerness and Darling-Hammond (2005) reported that, according to the National Research Council, a "key element for successful learning is the opportunity to apply what is being learned and refine it," and teacher preparation is "learning about practice *in* practice" (p. 401). Ball and Cohen (1999) also coined the process as "learning in and from practice" (p. 10). Darling-Hammond (2006) suggested that strong teacher preparation programs have "a common clear vision of good teaching that permeates all course work and clinical experiences, creating a coherent set of learning experiences," and they have "extended clinical experiences . . . that are carefully chosen to support the ideas presented in simultaneous, closely interwoven course work" (p. 305). The National Council for Accreditation of Teacher Education (NCATE, 2010) argued that teacher education must be "fully grounded in clinical practice and interwoven with academic content and professional courses" (p. ii). The NCATE's (2010) Blue Ribbon Commission calls for a partnership between university-based teacher preparation programs and schools for a "shared decision making and oversight on candidate selection and completion" (p. ii).

Correspondence should be sent to Robin Hands, 59 Derryfield Avenue, Springfield, MA 01118. E-mail: robin.hands@uconn.edu

The Neag School of Education at the University of Connecticut is committed to this kind of intentionality, which is why the Integrated Bachelor's and Master's program (IB/M) offers a wide range of field experiences to teacher candidates. Teacher candidates enter the program at the beginning of their junior year and complete the program after they finish their 5th-year postgraduate master's degree studies. This article describes the program requirements and clinical experiences. In essence, it intends to provide an illustration of the interwoven teacher education curriculum as promoted by Darling-Hammond and other aforementioned scholars.

PARTNERSHIP INFRASTRUCTURE FOSTERS INTENTIONALITY

Frequently, institutions of higher education and P-12 schools in the United States have collaborated to advance agendas of mutual interest. Such collaboration has been particularly noteworthy with the goal of preparing and sustaining professional educators. Holmes Group (1990), Clark (1999), and Darling-Hammond (1994) advocated for Professional Development School (PDS) for teacher preparation programs. These schools do not just provide field placements for teacher candidates; a rich and reciprocal relationship also develops the goal for simultaneous renewal of both the university and the public school for the sake of teacher candidates and K-12 students. Partnerships between teacher preparation programs and public schools are essential in providing contextual experiences for teacher candidates. The schools serve as the clinical sites where the theories and practical applications are visible and active. Without the opportunities schools provide to observe and practice teaching, the experiences of teacher candidates would be hypothetical and static.

The Neag School recognizes the importance of local schools in the process of preparing future teachers. The Neag School currently partners with seven school districts, consisting of 32 schools, representative of suburban and urban centers. Every teacher candidate spends time in both suburban and urban districts during their 3 years in the IB/M program. To maintain the health of these partnerships and sustain simultaneous renewal, the Neag School has made a commitment to hiring four full-time clinical faculty, each with a terminal degree and a focus on the importance of the practitioner in the preparation of future teachers. One of the faculty members serves in the role of Director of School–University Partnerships, responsible for all functions in clinical settings and the oversight of corresponding seminar classes. The other three faculty members serve as Professional Development Center (PDC) coordinators. A PDC refers to a public school district, and within each district, the PDC coordinator acts as a liaison between individual Professional Development Schools (PDS) and the university. All clinical faculty members teach the seminar classes that support the foundations of fieldwork and merge the theory and practice of teaching.

In addition to having "feet on the ground" in the public schools, it is important to maintain regular communication with public school officials in each of the seven PDC. In 2010, the Schools as Clinics Committee was initiated and cochaired by the Director of School–University Partnerships and one of the PDC coordinators. The committee's purpose is to provide PDS stakeholders with a forum for discussing diagnosis of candidate performances, identifying pertinent partnership issues, recommending policy, dialoguing about the continued improvement of the IB/M program, and finding ways to promote simultaneous renewal, which is the ultimate goal of maintaining PDS.

Since its inception, the Schools as Clinics Committee has used PDS standards, generated by the Blue Ribbon Commission of the National Council for Accreditation of Teacher Education (2010) and the nine essentials promoted by the National Association of Professional Development Schools (2008) to guide and assess where each school partner falls on a continuum of growth toward strengthening the partnerships that exist between the school districts and the Neag School of Education. This assessment process and subsequent data were used to develop a Memorandum of Understanding that binds both partners to an annual partnership commitment and the articulation of specific roles and responsibilities.

Other initiatives that have evolved out of the Schools as Clinics Committee include a coteaching pilot in one of the Professional Development Secondary Schools, and a Lead Teacher/Site Coordinator role established in each of the 32 PDS. Although both of these Schools as Clinics Committee initiatives provides solid evidence to support the fact that a foundation and an infrastructure are being created in order to promote simultaneous renewal between and among partnership schools and the university, in order for simultaneous renewal to continue to occur between and among partners, there must be trust. Open communication and a degree of transparency on the part of the university and public schools are necessary for long-term partnerships to thrive. It was in this spirit that a survey was developed and disseminated, in 2012, to the 32 PDS that partner with the Neag School. The purpose of the survey was to assess the extent to which simultaneous renewal is occurring in partnership schools.

Data indicate that, overall, school principals in P-12 partner schools believe that the mission statement developed by representatives from partnership schools is being fulfilled. Regarding educational practices and their impact on the total learning community, including P-12 student learning, responses from partnership school principals ranged from generally positive to overwhelmingly positive. They also agreed that PDS participants' practice explicitly focuses on providing improved and enhanced educational opportunities for all P-12 students, which is a salient goal of any credible teacher preparation program. Data from the survey, combined with some narrative offered by the Neag School's clinical faculty and demographic information ascertained from the most recently available Connecticut Public School Strategic School Profiles (2009–2010) were used in this report in an effort to develop a baseline for helping the university assess, shape, and augment life-giving interactions with school partners in the common mission of preparing tomorrow's educators.

TEACHERS DEVELOPMENT PHASES

This section of the article provides an overview of the program structure during teacher candidates' 3 years in the program. See Table 1.

Fall Semester Junior Year: Student as Learner

Once accepted to the program, students begin their fall semester, junior year, with a 6-hr per week clinical placement in either an urban or a special education setting in one of the seven PDC (partnership school districts). The focus of the junior year in the IB/M program is that of *Student as Learner*. The seminar class that accompanies the clinical experience is designed to

TABLE 1

Coursework versus Clinical and Field Experience Credits and Hours for the University of Connecticut Neag School of Education 5-Year Integrated Bachelor's and Master's Degree Teacher Preparation Program

			Neag School Integrated Bachelor's and Master's Degree Teacher Preparation Program				
		Coursework Before Entering Neag School	Coursework After Entering Neag School (Total Hours = 1,530–1,695 hr)		Clinical and Field Experiences After Entering the Neag School (Total Hours = 1,116)		
Certification Grades	Subject Area	Total General Education Credits and Hours (540 hr)	Total Content Credits and Hours (540–630 hr)	Total Education Credits and Hours (960–1,095 hr)	Junior and Senior Year Clinical Placements (172 hr)	Senior Year Student Teaching Placements (440 hr)	Master's Year Internship (504 hr)
K-12	Special education	36 (540 hr)	39 (585 hr)	74 (1,110 hr)	172 Hours (6 hours/week × 9 weeks × 3 semesters). The clinical placement awards 9 course credits (3 credits × 3 semesters). These credits are counted in the Total Education Credits and Hours Column because, in addition to 172 hr in schools, students take a concurrent seminar course.	9 Credits; or 440 hr (full time: 40 hr/week × 11 weeks)	7 credits; or 504 Hours (18 hours/week × 2 semesters)
7-12	Physics		36 (540 hr)	66 (990 hr)			
	Mathematics						
	General science		39 (585 hr)				
	Earth science		36 (540 hr)				
	Chemistry						
	Biology						
	Agriculture		39 (585 hr)				
	History		42 (630 hr)				
	World languages		36 (540 hr)				
	English			69 (1,035 hr)			
K-6	Elementary education		39 (585 hr)	73 (1,095 hr)			

Note. The hours and credits listed here are minimum program requirements. The students are required to complete 120 undergraduate credits and 30 graduate credits before they complete the program. Table 1 may exceed the 150 credits due to the fact that there could be some overlapping between general education courses taken before entering the Neag School and content courses after they enter the Neag School. Further, students are eligible to take additional content courses so that they obtain a second bachelor's degree in a subject field or they are eligible for a cross endorsement certification issued by the Connecticut State Department of Education. Source: Neag School of Education, University of Connecticut, August 2010.

help teacher candidates merge the theory and practice of teaching and to introduce them to issues of social justice. In addition, its purpose is to specifically support students as they participate and observe, for the very first time, in a special education setting or a content area/grade level in which they are pursuing certification. The seminar leader provides structure, order, and consistency to the various interactions and encourages students to probe the intricacies of professional issues together.

The fall seminar focuses on the scope and spectrum of schooling with a special emphasis on the diversity found in schools (i.e., disabilities, cultural, learning differences, poverty, urban and suburban issues). The 12 democratic conditions outlined by Soder (2001) are used as a basis for an Art in Democracy project and a culminating mini-movie, in which students must identify the operationalization of one of the democratic conditions in the clinical setting.

Another important strand found in the seminar course is the attention paid to the *moral dimensions of teaching* (Srotnik, 2001): enculturating the young to participate in a democracy, accessing knowledge about teaching and learning, nurturing pedagogy, and preparing teachers to act as stewards of schools. Through observation and reflection, teacher candidates take field notes and become familiar with the early stages of data collection, inquiry, and research as well as engage in literature related to education and, more specifically, to the moral dimensions of teaching. They are expected to connect their theoretical coursework to their clinical experiences through the process of reflective writing and dialogue.

Course activities have been carefully tailored to ensure teacher candidates become as embedded in the school and community culture as possible. Preconstructed observation forms assist the IB/M student in a pointed investigation of students, schools, and learning. This sets the foundation for understanding the professional knowledge base of education. The teacher candidates are also expected to look, from a variety of perspectives, at the school communities in which they are placed and the K-12 students with whom they are working as they begin to explore the concept of critical pedagogy.

Overall, the learning activities students encounter during the fall semester of their junior year have been intentionally designed to confront misconceptions, stereotypes, and deficit thinking and to instill a desire to explore more deeply the complexities of the communities in which teacher candidates are placed through honest and open dialogue, observation, and reflection.

Spring Semester Junior Year: Student in the School Context

The overarching objective during the second semester of the junior year is to learn about the *Student in the School Context*. To facilitate understanding in this area, both the clinic placement and the weekly seminar focus on the observation of, interaction with, and discussion about students in the school context, including the integration of concepts of social and community issues, and exceptionalities. During both the clinical component and the seminar, relationships to core coursework, such as learning theory, pedagogy, curriculum development, and the use of technology in education, are emphasized. Teacher candidates begin their path toward becoming professional educators as they explore the importance of inquiry; the moral obligations of the profession; and how the foundations, philosophies, and issues in education continue to have an impact on the practice of teaching as both reflective and analytical processes. Once again, teacher candidates spend 1 day per week in a PDS (at least 6 hours). The role of the teacher candidate is to be a participant and an observer. Observing carefully, listening actively, and interacting with students in the setting in which they are placed are the primary foci of the semester.

Teacher candidates are exposed to a variety of educational philosophies (Idealism, Realism, Pragmatism, and Existentialism) and the impact each continues to have on educational trends and issues. Instead of explicitly teaching one philosophy or theory, teacher candidates are introduced to myriad ways of thinking about teaching, which allows them to critically reach their own conclusions and apply what they have learned to the process of developing their own philosophies of education. They also engage in a small-group activity, using what they know about educational philosophy, curriculum development, policy and structure, pedagogy, methodology, and behavior management to create a "perfect school." A current-issues paper is required of candidates, and subsequently they must design and teach a lesson to their peers that focuses on the issue but is based on constructivist learning theory principles.

The Case Study

The Case Study is the culminating project for the course and requires teacher candidates to take an in-depth look at one or two students with whom they interact and about whom they gather data for 6 weeks. Candidates are asked to think holistically about one student and to explore the contexts in which the student lives and learns, both in and out of school. Teacher candidates must identify and discuss issues from a sociocultural perspective and explain how those issues influence the student's participation in schooling and other learning activities. They are asked to apply theory and concepts (from prior and current courses) to the realities and complexity of schools and students. In so doing, teacher candidates could broaden their own perspectives and push their thinking about various issues, including examinations of their own prior beliefs and experiences.

Promising Practices Observation Tool

Teacher candidates are given a document titled "Promising Practices Observation Tool" to support them in careful data collection. This is a formative assessment tool and observation protocol that identifies 24 professional practices necessary for competent teachers to exhibit. Juniors use the Promising Practices Observation Tool to observe their clinic teacher and then reflect on what they see and hear. They are then asked to write a paper regarding one practice that they observed in their clinic setting and one that was not employed. Teacher candidates must provide observational data to explain what they saw and heard, research to support the importance of the practices, and a written reflection about how they plan to implement these practices in their own teaching.

Responsibility, Relationships, and Reflection

Teacher candidates are given a dispositions self-assessment to help them identify their strengths and weaknesses in this important area. The tenets based on responsibility, relationships and reflection (Hands, 2010) are woven throughout the junior year experience, in the fall and spring seminar settings and in the clinic settings. Exploring what taking *responsibility* looks like in a school setting entails an examination of professional ethics. Teacher candidates are encouraged to observe how a professional should look and act within a learning community. They are also encouraged to explore the significance of holding high expectations for all students while offering the support and accommodations that are necessary for each student to succeed. Regarding the importance of *relationships*, it is stressed that teaching is as much about relationships as anything else. K-12 students need to know the teacher is invested in their well-being to develop the trust necessary to effectively learn. *Reflective* practice is also encouraged, as teaching requires a willingness to accept and respond to constructive feedback in order to change and improve upon practices, behaviors, and attitudes.

The practice of promoting compassionate and just learning environments is a special trait throughout the IB/M program. Classroom management is explored in the context of relationships, and it is emphasized that K-12 students really want to learn appropriate behavior. Thus it is the job of every professional educator to hold this belief about each student even when the evidence may not suggest it is true (Smith, 2004). Junior seminar leaders model passionate and enthusiastic teaching for teacher candidates and encourage them to fully invest themselves in their content area so that they will feel confident and passionate about facilitating the learning of content knowledge for their K-12 students.

Assessment Literacy

Assessment is another significant aspect of teaching and learning, which is why the basic principles of assessment are woven into all of the coursework and clinical experiences offered to teacher candidates. However, there is a special emphasis offered during the spring semester of the junior year and the fall semester of the senior year. The IB/M program highlights the importance of using assessment data to inform instructional decisions and practices, and teacher candidates are introduced to the significance and appropriateness of using performance-based, standardized, and criterion-referenced assessments, among other forms of assessment.

Performance-based assessments are modeled for teacher candidates in each of the seminar classes they take in the junior year. For example, teacher candidates are asked to write lesson plans based on a children's book and to design performance assessments that will indicate whether specified learning objectives were met by P-12 students. A junior, in the fall of the year, designed a sequencing lesson based on a children's story, and to assess her third graders' understanding of sequencing, she asked each of the students to write their own stories, cut them up, and give them to partners to properly sequence.

A variety of standardized assessment instruments are used in the spring of the junior year to examine how and why standardized test data help to inform educators and parents by comparing student-to-student results that have been elicited with the application of consistent administration and scoring protocols. Criterion-referenced tests, such as the Gates-MacGinitie Reading Test (MacGinitie, MacGinitie, Maria, & Dreyer, 2002), are used to highlight a different way to assess students; instead of comparing student-to-student results as the standardized test does, a criterion-referenced test compares individual student growth to a set of criteria to show growth over time. Teacher candidates are encouraged to think about when and why it would be appropriate to apply these various methods of assessment.

Fall Semester Senior Year: Methods Courses

During the fall semester of the senior year, teacher candidates begin to focus on content and pedagogical knowledge, which is woven into the 6-hr-per-week clinical experience. Methods courses promote unit and lesson planning, introducing teacher candidates to a variety of assessment tools and strategies while offering them practice in the thoughtful alignment of assessments with learning objectives and content standards. Clinical placements are consistent with the students' chosen certification area. Although the teacher candidates' clinical experiences begin as a 6-hr-per-week placement in the fall semester, the same placements evolve into full-time student teaching experiences for the spring semester.

In addition, the clinical experiences become more demanding, including more clinical opportunities for students to design lessons and teach classes. The seminar continues to serve the purpose of assisting students in their efforts to be analytic and reflective while making explicit connections between what they are learning in their university course work and what they are undertaking in their clinical experiences.

Spring Semester Senior Year: Student Teaching

Over the course of the spring semester, teacher candidates are given the occasion to take calculated learning risks, to put pedagogy into practice, to seek answers to educational questions, to demonstrate their understanding of content knowledge, to solve problems creatively in a professional context, to plan effective student-centered instruction, to collaborate with peers and colleagues, to receive guidance and feedback from experienced professionals, and to shine. Each teacher candidate is placed in one of the seven PDC (partnership school districts) and assigned to a TEAM-trained cooperating teacher at a grade level and in a content area in which she or he is pursuing professional certification. Teacher candidates are also paired with a university supervisor, who conducts four formal observations, facilitates evaluations, and provides a bridge between the university and the public school classroom in which teacher candidates are placed.

TEAM and the Common Core of Teaching

The acronym TEAM stands for *Teacher Education and Mentoring Program: Bridging the Journey from Preparation through Professional Practice*. The Connecticut State Department of Education has created a systematic induction program, using this model in an effort to mentor new teachers. This model is also used to prepare cooperating teachers who will be mentoring teacher candidates. The TEAM model is based on Connecticut's Common Core of Teaching, which emphasizes both the art and the science of teaching by focusing on knowledge, skills, and qualities. Six domains have been identified (Connecticut State Department of Education, 2010): content and essential skills; classroom environment, student engagement, and commitment to learning; planning for active learning; instruction for active learning; assessment of learning; and professional responsibilities and teacher leadership. Cooperating teachers assume their role as mentor teachers, working in the significant capacity of creating the next generation of educators, with a solid foundation of what the state of Connecticut considers best educational practices.

The university supervisor plays a significant role in the student teaching process by providing observational data and feedback to the teacher candidate, facilitating the three-way evaluation meetings that take place at the midterm and end of the semester, assigning the final grade, and providing letters of recommendation to teacher candidates.

Requirements for Teacher Candidates

Teacher candidates must develop and utilize a system for planning and scheduling that is personally useful, consistent with the requirements of the cooperating teacher, and meets individual school requirements. Long- and short-term planning, as well as assessments, must be presented by the teacher candidate to the cooperating teacher in a format that is clear, specific, and easily understood. Prior to implementation, the cooperating teacher and/or university supervisor must approve instructional plans and assessments. Throughout the student teaching experience, candidates receive regular feedback from university supervisors, cooperating teachers, and seminar leaders with regard to the efficacy of the assessments they are developing and how to use those data to inform their instruction. Issues related to standardized testing and criterion-referenced assessments are also explored in seminar classes, as are various systems of documentation and the importance of making assessment audit trails, such as formative and summative assessment scores, transparent to students and their families.

Reflection

Academic responsibilities include the study of teaching through analysis and self-evaluation as ongoing processes. Evidence of this study includes discussing teaching practices regularly with seminar leaders, cooperating teachers, university supervisors, school colleagues, and teacher candidate peers. Often, this information is processed in the weekly seminar where teacher candidates are expected to complete readings and assignments as well as participate in seminar activities. Seminar assignments are designed to support teaching experiences and help teacher candidates make sense of what they are experiencing. Some essential questions explored in the seminar include: What does it mean to be a highly effective teacher? How does one develop inner authority? How might one utilize opportunities presented in student teaching to build professional expertise?

Intentional Placements

Teacher candidate placements are highly intentional, although ensuring quality is a challenge and is addressed in a later section of this article that speaks to the infrastructure required to sustain partnerships. State data on strategic school profiles and student achievement trends are used to decide with whom the Neag School will partner on behalf of teacher candidates. The goal is to create diverse field placements in which educational competence and best educational practices are being employed. The program endeavors to tailor field experiences to capitalize on individual teacher candidate strengths while also offering challenges so that candidates will build confidence and begin to develop a sense of their own teaching styles and preferences.

Student Teaching Assessments

The IB/M program has developed a variety of ways to assess the progress that teacher candidates make over the course of the spring semester. The program has developed sustained relationships with clinic and cooperating teachers that facilitate candid dialogue. In addition to this informal progress monitoring, the program has built in mandatory three-way evaluation meetings with teacher candidates, cooperating teachers, and university supervisors. The faculty has developed a variety of survey instruments that are used to collect data regarding the efficacy of our teacher candidates' experiences in the field, including their perspectives on the experiences and feedback regarding ways the overall program could be enhanced. These data are analyzed each year, and the outcomes are considered in redesigning various program elements.

A self-assessment occurs during the sustained student teaching experience, when teacher candidates videotape themselves teaching a formally designed lesson. They edit the lesson and write a three- to five-page reflection on their own practices. Segments of each video are chosen by the teacher candidate to share with peers in the seminar class in order to elicit feedback and support. Seminar leaders review each video, along with the lesson plan, the support materials used, P-12 artifacts collected, and the reflection, in order to offer extensive feedback. The entire assignment is uploaded into the TaskStream electronic portfolio that each teacher candidate maintains in an effort to document growth throughout his or her IB/M program tenure.

The Professional Practices Observation Tool is an observation protocol that includes 24 teaching practices, which teacher candidates must demonstrate at a level of acceptable proficiency during the student teaching experience. This is the same assessment tool used in the spring of the junior year when teacher candidates have their 6-hr-per-week clinic experiences and are expected to keep a journal of classroom observations in the learning setting in which they have been placed.

The purpose of the Professional Practices Observation Tool is twofold. One, the protocol provides a formative and ongoing assessment of the teacher candidate's progress and allows all stakeholders a transparent view of the process. The second purpose is to prevent observers from focusing on a pervasive issue or challenge that is present for the teacher candidate and to take a more holistic look at the application of practices. If a pervasive issue exists, the observer can document it in the generic comments section of the observation in order to maintain an audit trail of the teacher candidate's progress in this area.

By the end of the student teaching experience, all 24 practices should have been observed, with the cooperating teacher completing four formal observations, and the university supervisor completing four formal observations while observing three professional practices each time. If a teacher candidate does not demonstrate proficiency on one or more of the practices, he or she may ask their observers to observe again in another lesson. At the end of the semester, for teacher candidates to graduate, this document must be uploaded into their electronic portfolios.

Formal Assessments

Formal assessments of teacher candidates include a midterm and final evaluation. The same rubric is used for both; however, at the midterm, a letter grade is not issued, and there is an additional column of "Not Applicable" added to the evaluation in order not to penalize teacher candidates for not having the time to address all of the standards. The rubric used includes content-specific standards embedded for all subject areas. The development of this form is based on the Connecticut Common Core of Teaching and standards promoted by the national specialty professional associations in various content areas. Therefore, each subject area has its own content-based rubric. The rubric is broken into two major categories including how teacher candidates apply knowledge through planning, instructing, assessing, and adjusting and how teacher candidates demonstrate professional responsibility through professional and ethical practice, reflection and continuous learning, and leadership and collaboration.

Two three-way meetings are held as part of the evaluation process. The teacher candidate, the cooperating teacher, and the university supervisor all meet to discuss the various standards on the rubric and to come to consensus regarding the teacher candidate's progress. The teacher candidate is encouraged to complete a hard copy of the rubric prior to the three-way meeting as an exercise in reflective practice and self-assessment. Likewise, the cooperating teacher is asked to come to the meeting with a scored draft in order to facilitate a thorough conversation regarding the teacher candidate's progress and areas that require improvement. The university supervisor oversees the conversation in the meeting, shaping the process by adding his or her observations of the student's progress and assisting the group to come to consensus.

The 5th Year: Teacher as Leader

The 5th year is a distinguishing feature of the program and the capstone of the experience. It affords 5th-year students the opportunity to work within a community of fellow educators and to challenge themselves as leaders and learners through the completion of an inquiry project. The inquiry project is based on an action research model, whereby 5th-year interns are expected to collect data in their internship placements, collate data, analyze them, and interpret them in an effort to respond to a research question that they design in tandem with the school in which they are placed.

In the corresponding seminar course, interns engage in dialogue and reflect with peers on scholarly articles, education in the news, educational theories and theorists, and experiences at school sites with the ultimate goal of expanding their awareness of key issues like diversity, equity, and social justice. The course is designed to support 5th-year teacher candidates as they work in schools in an internship setting and continue to develop teaching expertise through graduate coursework and professional reflection. The broad goals of the seminar course are to support an exploration of what it means to be a professional educator and leader in the diverse school community of the 21st century. In this course, interns explore their questions related to best practices by engaging school personnel, reviewing the current literature on research in education and developing an inquiry project based on their interests and questions.

Fifth-year candidates actively engage in discussions about a variety of issues in education including the roles of teachers in the educational community—particularly teachers as leaders—and current issues in education and teaching as well as considering the effects of poverty on students and the importance of resiliency in the context of all educational settings. The small seminar format allows for participants to delve deeply into educational issues and provides an opportunity for individual attention and responsibility.

The expectation is that interns will devote 18 hr each week to professional responsibilities at the internship site. Interns are encouraged to take full advantage of the opportunity to develop a relationship with the internship supervisor or coordinator. The internship supervisor can be a district superintendent, a building administrator, a department head, a curriculum coordinator, or a classroom teacher. These educators typically manifest vast amounts of experience and expertise that they are willing to share with interns.

Each internship has its own unique features and expectations. The internships are generated out of an identified need at the school level and then proposed to PDC coordinators (the liaisons between the university and the public schools), who help the school communities shape the proposals in ways that will appeal to 5th-year interns and provide them with leadership, teaching, and growth opportunities. During the spring semester of the senior year, teacher candidates choose three internships (two of them must be in urban districts), and then a committee of faculty members convenes to place students in one of their three choices. Unlike student teaching or other clinic placements, it is the responsibility of the 5th-year teacher candidates to collaborate with school personnel in order to give shape to the internship. Because candidates are neither classroom aides nor substitute teachers, they must work with the internship supervisor to clearly define roles and responsibilities; in so doing, they experience what it is like to be a *Teacher as Leader* and to acquire a mile high view of the public school community.

CONCLUSION

The heart and soul of any comprehensive teacher preparation program is the fieldwork that supports the theory learned in coursework and offers an opportunity to operationalize best educational practices. Graduates of the IB/M program took an exit survey that included the following question: What aspects of your preparation at UConn do you think will be most valuable to your career as a teacher? Overwhelmingly, graduates responded that their clinical experiences have best prepared them for a teaching career. One student said, “The clinical experiences I had, working closely with students and teachers is something you can’t recreate in a University classroom.” Another student indicated, “I believe the number and variety of field experiences has contributed most to my preparation.” A third student wrote, “I believe our clinic placements in both urban and suburban settings will be most valuable. These experiences cannot be taught in the classroom and I believe everyone should see both types of districts.” These data show that the coursework–clinic–seminar structure, whereby teacher candidates are offered a broad and deep perspective on the art and science of teaching, influences the perceptions of those teacher candidates on the value of practice. The clinical experiences are particularly enriched when they occur within the context of partnership settings. The PDS model fosters the potential to engage in simultaneous renewal, to choose quality placements for teacher candidates and to maintain trusting and sustained relationships that help to create an enduring teacher preparation program that promotes learning about practice in practice.

AUTHOR BIOS

Robin Hands, Ed.D., is the Director of School and University Partnerships in the Neag School of Education at the University of Connecticut. She has presented on the topic of education and school-university partnership at regional and national conferences.

Yuhang Rong, Ph.D., is the Assistant Vice Provost for Global Affairs at the University of Connecticut (UCONN). He has worked in the fields of student affairs, international affairs, and academic affairs in higher education, as well as in the area of teacher quality enhancement in K-12 education. He is a nationally recognized accreditation expert for educator preparation. Until recently, he served as the Assistant Dean for the Neag School of Education at UCONN.

REFERENCES

Ball, D. L., & Cohen, D. K. (1999). Developing practice, developing practitioners: Toward a practice-based theory of professional education. In L. Darling-Hammond & G. Sykes (Eds.), *Teaching as the learning profession: Handbook of policy and practice* (pp. 3–32). San Francisco, CA: Jossey-Bass.

Bransford, J., Darling-Hammond, L., & LePage, P. (2005). Introduction. In L. Darling-Hammond & J. Bransford (Eds.), *Preparing teachers for a changing world: What teachers should learn and be able to do* (pp. 1–39). San Francisco, CA: Jossey-Bass.

Clark, R. W. (1999). *Effective professional development schools. Agenda for Education in a Democracy Series, Vol. 3.* San Francisco, CA: Jossey Bass.

Connecticut State Department of Education. (2010). *Common Core of Teaching: Foundational skills.* Hartford, CT: Author.

Darling-Hammond, L. (Ed.). (1994). *Professional development schools: Schools for developing a profession.* New York, NY: Teachers College Press.

Darling-Hammond, L. (2006). Constructing 21st-century teacher education. *Journal of Teacher Education, 57*, 300–314.

Hammerness, K., & Darling-Hammond, L., with Grossman, P., Rust, F., & Shulman, L. (2005). The design of teacher education program. In L. Darling-Hammond & J. Bransford (Eds.), *Preparing teachers for a changing world: What teachers should learn and be able to do* (pp. 390–441). San Francisco, CA: Jossey-Bass.

Hands, R. (2010). *Three Rs of caring and reflective practitioners.* Retrived from http://ncate.education.uconn.edu/schoolsasclinics/clinical-settings/dispositions/

Holmes Group. (1990). *Tomorrow's schools: Principles for the design of professional development schools.* East Lansing, MI: Author.

Kierkegaard, S. (1938). *The purity of heart is to will one thing.* New York, NY: Harper.

MacGinitie, W., MacGinitie, R., Maria, K., & Dreyer, L.G. (2002). *Gates-MacGinitie reading tests, 4th edition (GMRT-4).* Cambridge, MA: Riverside.

National Association of Professional Development Schools. (2008). *What it means to be a professional development school.* Retrieved from http://www.napds.org/9%20Essentials/statement.pdf

National Council for Accreditation of Teacher Education. (2010). *Transforming teacher education through clinical practice: A national strategy to prepare effective teachers. Report of the Blue Ribbon Panel on Clinical Preparation and Partnerships for Improved Student Learning.* Washington, DC: Author.

Smith, R. (2004). *Conscious classroom management: Unlocking the secrets of great teaching.* San Rafael, CA: Conscious Teaching.

Soder, R. (2001). Education for democracy. In J. Goodlad & T. McMannon (Eds.), *Developing democratic character in the young* (pp. 182–205). San Francisco, CA: Jossey-Bass.

Srotnik, K. A. (2001, April). *Renewing schools & teacher education: An odyssey in educational change.* Washington, DC: AACTE Publication, p. 28. Program folder. Institute for Educational Inquiry, Seattle, WA.

PEABODY JOURNAL OF EDUCATION, 89: 466–481, 2014
Copyright © Taylor & Francis Group, LLC
ISSN: 0161-956X print / 1532-7930 online
DOI: 10.1080/0161956X.2014.942106

Routledge
Taylor & Francis Group

Clinical Preparation of Teachers in the Context of a University-Wide Community Engagement Emphasis

Melissa Evans-Andris, Diane W. Kyle, Ann E. Larson, Harrie Buecker, W. Blake Haselton, Penny Howell, Caroline Sheffield, Christine Sherretz, and Ingrid Weiland
University of Louisville

In this article, we describe development of a clinical model of teacher education connected to a community engagement commitment of the university known as the Signature Partnership Initiative. The current clinical model builds upon previously established collaborations of the College of Education and Human Development with district and school partners to offer a more authentic, comprehensive, and systemic approach to preparing new teachers and supporting the continued learning of experienced teachers. The development and implementation of the clinical model in two elementary schools and one middle school have provided evidence of both benefits and challenges. The article provides three descriptive narratives that elaborate on these and offers insights about essential components and research possibilities needed for improving the quality and outcomes of university–school clinical partnerships for teacher education.

INTRODUCTION

Teacher quality, particularly as it relates to the preparation of new teachers, has drawn widespread national attention in recent years. With data indicating the growing problem of teacher attrition, especially among early career teachers (Cochran-Smith, 2004; Darling-Hammond, 2003; Ingersoll, 2001), the need for a new model to educate teachers in the service of P-12 student learning has never been more compelling.

The most effective way to prepare teachers is through teacher education programs directly connected to teaching practice (Darling-Hammond, 2005). The American Association of Colleges for Teacher Education (AACTE, 2010) outlined the features of such preparation in its 2010 policy statement and, more recently, these features appeared in the standards presented by the Council for the Accreditation of Education Preparation (CAEP, 2013). CAEP's Standard 2 focuses on partnerships for clinical preparation, clinical educators, and clinical experiences.

The frameworks from both AACTE and CAEP have guided an evolving partnership between the University of Louisville's College of Education and Human Development (CEHD) and identified schools in the local public district. In this article, we describe a clinical model in the context of a university-wide commitment to community engagement. This current work builds on

---

Correspondence should be sent to Melissa Evans-Andris, Research Office, College of Education and Human Development, University of Louisville, Louisville, KY 40292, USA. E-mail: mevans@louisville.edu

previously established collaborations among educators in the district, schools, and university to offer a more authentic, comprehensive, and systemic approach to the preparation of new teachers and the continuing professional development of experienced teachers.

CEHD's teacher education programs, both at the undergraduate and graduate levels, are accredited by the National Council for Accreditation of Teacher Education (NCATE) and the Kentucky Education Professional Standards Board. The programs prepare candidates for pre-K through Grade 12 teaching positions and graduate approximately 275 students each year. Our conceptual framework, *Shaping Tomorrow: Ideas to Action*, has as its foundation three guiding principles—inquiry, action, and advocacy—as a means of solving problems and improving the lives of children, families, and communities. A key goal of our programs and embedded in our clinical model is the development of teacher candidates who become critical thinkers, problem solvers, and professional leaders who advocate for the principles of social justice and equity.

As described in the three examples that follow, CEHD's clinical model evolved from an established working relationship between the college and the schools where teacher candidates were placed for field experiences and student teaching. Over time, the relationship grew to accommodate an increased presence of university faculty and teacher candidates in the schools through delivery of professional development both during the school year and summer months, mentorship of teacher candidates, onsite university course offerings, and collaborative research endeavors.

CEHD's clinical model of preparing teachers not only connects to the current efforts to transform teaching as outlined in the report of NCATE's (2010) Blue Ribbon Panel on Clinical Preparation and Partnerships for Improved Student Learning but also expands from the foundational efforts associated with Professional Development Schools. As noted in NCATE's (2001) *Standards for Professional Development Schools*, these partnerships have as their mission the professional preparation of candidates, teacher and faculty development, inquiry directed at the improvement of practice, and enhanced student learning. This mission resonates with the overarching goals and activities of CEHD's current clinical model as it relates to the university initiative explained next.

University of Louisville's Signature Partnership Initiative

The purpose of the university's Signature Partnership Initiative (SPI) is to engage university faculty with community agencies and organizations that enhance the education, health, economic, and social conditions of West Louisville, an area of the city whose population is disproportionately characterized by low socioeconomic status. The university's Office of Community Engagement leads the work that draws upon the expertise and energy of faculty, staff, and students to address quality of life issues, including the academic performance of students in the local public school system. The district is the largest urban school district in the state and ranks in the top 30 largest in the nation. It serves more than 100,000 students and employs approximately 6,400 teachers. By virtue of being located in the designated zip codes of West Louisville, two elementary schools, one middle school, and two high schools in this district became SPI schools.

Through its SPI relationship, CEHD faculty and school partners, over time, have developed and refined a teacher preparation clinical model. The work began approximately 6 years ago with a focused effort in one elementary school, Bernard Academy,[1] and more modest efforts at another SPI site, Riverside Elementary. More recently the work expanded to the middle school level at North Point Middle. Bernard Academy was identified as the University of Louisville laboratory school in the district's elementary magnet program to attract families from outside of the neighborhood. The intention was to promote economic diversity in the elementary student assignment plan. Beginning small and focused enabled those involved to familiarize themselves with and learn from the nuances of using a clinical model in high-poverty urban sites. In the sections that follow, we offer more details about the development and evolution of our clinical model as well as lessons learned in the process.

CLINICAL MODEL IMPLEMENTATION WITHIN ELEMENTARY SCHOOL PARTNERSHIPS

In close proximity to each other, both SPI elementary schools, Bernard Academy and Riverside Elementary, enroll students from surrounding areas having substandard housing, limited business enterprises and recreational facilities, high incidents of crime, and low educational attainment levels of adults. We begin with a description of involvement at Bernard Academy.

Bernard Academy

Bernard Academy sits within a neighborhood of boarded-up houses, several liquor stores, and empty lots. The one-story school, built at the turn of the 20th century, is bordered on one side by a street and a large yard with a cemetery and parking lot on the other. A clinical partnership began a few years after the hiring of a new principal. At that time, the median income for the school's families was $12,400, with a minority population of slightly more than 50%, and 96% of the 376 students qualifying for free or reduced-cost lunch (Sherretz & Kyle, 2011). The principal arrived in 2005 with a personal understanding of this population. He had grown up in a high-poverty Appalachian setting and, with the assistance of others and his own resiliency, had reached personal goals of high school, college, and doctoral program completion. An award-winning teacher certified by the National Board for Professional Teaching Standards and a respected "alumnus" of the Louisville Writing Project (associated with the National Writing Project), he became recognized in the local educational community as a visionary instructional leader with a strong work ethic and commitment to continuous improvement. Early on, he set out to recruit and staff Bernard Academy with like-minded, high-quality teachers who would want to work in partnership with the university to accomplish performance goals for the school and its students. Coincidently, at that time, his former superintendent had become the dean of CEHD.

The CEHD dean and Bernard Academy's principal entered into a partnership discussion. The dean had strong credentials as a school, district, and state leader in education reform. Prior to serving in his current role, he had been a teacher, principal, and then a superintendent of a nearby district known for excellent student academic achievement and high-quality teachers. He had supported initiatives to improve the instructional capacity in his district, including allocating resources and providing coaching and mentoring for teachers to pursue and achieve National Board for Professional Teaching Standards (NBPTS) certification. Further, he had advocated for a long-standing and successful Professional Development School partnership between one of his district's elementary schools and the university.

---

[1] All schools mentioned in this article have been assigned pseudonyms.

After the CEHD dean and Bernard Academy's principal reached agreement, steps to build the partnership began. A core team consisting of the school's principal, literacy coach, Family Resource Center coordinator, and a CEHD faculty member who served as a liaison to the school organized and led the work. The liaison was an assistant professor teaching literacy methods courses in the elementary education preparation program who enthusiastically embraced her new assignment. The group worked with a larger Redesign Team of additional partners from the university, school, and school district to provide an integral structural mechanism for collaboration to accelerate the growth and effectiveness of the partnership.

In this early phase, the faculty liaison worked with the school to supervise student teachers and teacher candidates engaged in field experiences. Over time, the liaison's role expanded as she gained acceptance from the principal and teachers. This side-by-side working together reinforced the core value that partners share responsibility for the support and improvement of teaching and learning, and the subsequent results.

One of the first areas of emphasis was investing in teachers and fostering teacher capacity by leveraging professional development opportunities supported by CEHD. These included an NBPTS cohort involving several teachers who committed to the process and, if successful, would remain at the school for a minimum of 3 additional years during which they would assume instructional leadership roles, such as mentoring teacher candidates. This cohort enabled the school to begin stabilizing teacher retention as well as to ensure qualified, expert teacher engagement in the clinical model. Additional professional development offered at the school included training through the Louisville Writing Project, a state-supported reading project, and initiatives that addressed identified school improvement goals.

In Year 2 of the partnership, the faculty liaison led professional development focused on closing an identified literacy achievement gap and developed a research agenda on issues identified with classroom teachers. Greenwood and Levin (2003) described this type of research as cogenerative inquiry in which trained researchers work with knowledgeable local stakeholders on relevant problems impacting a school and its students.

As the partnership evolved, the school allocated space in the building for a university-designated classroom where CEHD faculty would offer classes to teacher candidates on site. Course assignments exposed candidates to rigorous, authentic learning with a theory-to-practice and a practice-to-theory orientation as they learned from demonstration teaching, coteaching, strategies for assessment, and so forth. The *Writing Resiliency Project*, which paired preservice teachers with fourth-grade students who together worked through the writing process, is one example of how candidates experienced the connection between their own learning of content and pedagogy and the targeted academic goals for Bernard Academy students. This clinical approach facilitated a forum for candidates and school faculty to share, discuss, reflect on, and shape their professional growth.

Over time, CEHD capitalized on successes at Bernard Academy to leverage donor, foundation, and state funding to support the clinical model and partnership work. This funding provided additional resources such as a Bernard Academy teacher to serve as a Teacher-in-Residence to model best practices, mentor teacher candidates, and provide professional development; a 2-week summer boost project to mitigate summer reading loss among elementary students; and the distribution of books to students and their families to promote strong reading habits.

In the years since the clinical model began, Bernard Academy's laboratory school has hosted 90 teacher candidates. The work in this SPI urban location has exposed teacher candidates to authentic, positive learning experiences and challenged them to reconsider possible preconceived assumptions and biases regarding academic expectations for students from low socioeconomic backgrounds.

Eventually the principal, who worked with CEHD to establish a partnership in his school, left for an administrative position first at the state level and then back at the district. More recently, the original university faculty liaison resigned and left the metropolitan area to pursue a new job opportunity. Such shifts in key leadership positions commonly jeopardize the ongoing integration of change efforts. However, a promising sign that the clinical model will flourish at this site is that the former principal continues to support and promote university–school relationships in his current central office position, and Bernard Academy's new principal understands and advocates for the model. Further, the faculty member who stepped into the liaison role is familiar with the school, teaches the same literacy methods classes in the designated classroom, supervises teacher candidates, collaborates with the principal and Teacher-in-Residence, and engages in the school's professional development planning and activities. In short, the transition has been seamless.

Because Bernard Academy is noted as our designated laboratory school, considerable attention was devoted to ensure successful implementation and integration of CEHD's clinical model at that site. However, in the past few years we also initiated the model in the university's other SPI elementary school, Riverside Elementary. In the next section, we describe the evolution of the partnership and implementation of the model in that school.

Riverside Elementary School

Riverside Elementary, identified as having a district-designated environmental magnet program, is located in a close-knit community in West Louisville, not far from the Ohio River. Although the neighborhood is marked by high crime and unemployment, many community members are lifelong residents of the area and well connected with each other. Riverside is the oldest school in the district, and its structure resembles a steamboat to demonstrate the area's rich history as a rest stop on a major 19th-century shipping route. When the SPI began, Riverside was included by virtue of its location. At that time, 252 elementary students were enrolled at the school, 91.3% of whom qualified for free or reduced-cost lunch. The minority student population was near 43%.

The principal had been a classroom teacher for 18 years and principal at Riverside for 6 years. She grounded her leadership in attending to and advocating for the needs of her faculty and staff. She had been successful in raising students' performance on state tests and was exploring and developing ideas of how to implement the new environmental focus of the school most effectively. Many of the teachers at the school had been on staff prior to the environmental magnet designation and also wondered about changed expectations related to the new magnet designation.

For several reasons, it took some time before a clinical partnership for teacher education materialized at Riverside. First, leaders focused attention on learning from Bernard Academy's experiences in order to inform expansion to additional schools. Second, data from student academic performance on statewide tests revealed a more critical need to marshal resources in support of students at Bernard Academy than Riverside. Third, although an assistant professor on the CEHD faculty had expertise in literacy, an area of great need at Bernard Academy, the college did not have an assistant professor in elementary education with the environmental education expertise needed at Riverside. Fourth, in light of the new magnet focus, the principal needed time to gain confidence of how a university partnership would benefit her students and teachers. Consequently, the CEHD's initial presence at Riverside was limited to the placement of teacher candidates who were supervised by a faculty member on a yearly term contract.

The partnership with Riverside for clinical teacher education started to mature in 2011 when a newly hired, tenure track assistant professor assumed the role as the school's university liaison because of her knowledge and experience in environmental education. During her 1st year at Riverside, the university liaison strategically spent time establishing and nurturing collegial relations with the school's principal and faculty, laying the foundation for more targeted clinical work in the years to come. She taught a section of the elementary education program's science methods course at the school. Unlike Bernard Academy, however, this school did not provide a university-designated classroom; therefore, the class met in the school library. The space limitation, coupled with the liaison's need to become better known and more integrated into the school, hampered the development of the site-based partnership that year.

As the liaison began supervising teacher candidates in the fall of 2012, her consistent presence at the school created legitimate entry into the classrooms and further developed the important, foundational relationships with the staff and principal. She began attending all of the school's faculty meetings, which demonstrated to teachers her earnest interest in understanding their perspectives of the issues and foci of the school, its demographics and data, and its improvement plan. This allowed her to make connections across school efforts—for example, linking investigative mathematics strategies discussed in professional development and faculty meetings to science inquiry instruction for elementary teachers and their students. Making these associations through involvement in staff endeavors, as well as through extensive conversations with the Riverside principal, were critical to the development of teachers' perceptions of the liaison's commitment to an effective role in the partnership. It also enhanced teachers' understanding of the substantive role they could play in the preparation of teacher candidates.

Establishing this presence reinforced the continued development of the partnership and of the school as a placement for clinical model implementation. As a part of this development, the liaison realized unique challenges with teaching science methods on-site, such as the amount of materials needed to teach science as well as the teacher candidates' gaps in science content knowledge. This latter limitation hindered their work with the Riverside students, as they were not fully prepared to teach science content to K-5 students. Consequently, the liaison replaced the science methods course with an educational foundations course.

Finally, a great deal of work has been done to foster environmental education teaching with the Riverside teachers. In light of the school having an environmental focus, the teachers expressed a need for a greater repertoire of appropriate instructional strategies. The liaison collaborated with the school's environmental magnet coordinator to offer professional development as well as to model and coteach lessons. As a result, Riverside teachers now implement outdoor education and service learning projects that include integrated, cross-curricular environmental content. For example, the liaison has been working with Riverside teachers to utilize a claims-evidence-reasoning

(Norton-Meier, Hand, Hockenberry, & Wise, 2008; Zembal-Saul, McNeill, & Hershberger, 2013) framework to structure cross-curricular inquiry-based lessons both in the classroom and in the outdoors.

While the partnership for the elementary clinical model was progressing at Bernard Academy and Riverside, CEHD recognized potential advantages of expanding the model to the middle school level. The following section describes how this transpired.

CLINICAL MODEL IMPLEMENTATION WITHIN A MIDDLE SCHOOL PARTNERSHIP

Although the university identified an SPI middle school in West Louisville, subsequent changes in the district-wide student assignment plan identified the school as a new performing arts magnet site. This altered the demographic makeup of its student population. Given that the SPI was intended to serve students from partnership-selected schools as they moved from elementary to middle and then to high school, this change in demographics prompted CEHD to reevaluate the schools with which it would work. An analysis revealed that students from Bernard Academy were no longer matriculating to the SPI middle school as they had in the past.

CEHD leadership in consultation with the university's Office of Community Engagement established a new designation of partnership schools, to be called *SPI-affiliate schools*. Although these schools would be located outside the geographic West Louisville neighborhood, they would include students with similar socioeconomic characteristics and would have the potential for being excellent sites for a clinical model of teacher preparation. One such school was North Point Middle School located on the outskirts of the district's urban core, approximately 13 miles from West Louisville.

In 2011, the dean of the CEHD met with the principal of North Point to gauge the potential viability of such a partnership. Building from what had transpired at Bernard Academy as a laboratory school with an integrated clinical model, this discussion targeted the placement of teacher candidates, the logistics of establishing on-site university classes, the feasibility of a CEHD-designated classroom at the school, and ways in which CEHD faculty and teachers could work together to achieve the school's improvement goals. Based on enthusiastic response to the concept, North Point was newly named an SPI-affiliate partner school shortly thereafter.

The school was built in 1961 as a high school large enough to accommodate more than 3,000 students. Reorganized as a middle school in 1981, it presently serves more than 900 students. When the partnership began in 2011, North Point had the highest number of students who had attended Bernard Academy and had a similarly diverse population with 73% of the 915 students on free or reduced-cost lunch and a minority population of slightly more than 50%.

Having held her position for 2 years, North Point's principal was progressive, collaborative, and proactive. Holding a doctoral degree in education, she had training in leading Professional Learning Communities and participated actively in the district's leadership development program. She and her faculty dedicated themselves to building and reinforcing a culture of continuous improvement and innovation among the students, staff, and future educators at the school. She was highly motivated and supportive of the partnership and reinforced her firm commitment to work collaboratively with CEHD faculty and teacher candidates to promote partnership efforts.

For several additional reasons, North Point promised to be an advantageous site for a clinical model. The school's faculty and administration possessed or were gaining the expertise to contribute to the partnership in meaningful ways. Three teachers held NBPTS certification. Further, North Point was aggressively building capacity for teacher leadership, as seven additional teachers were interested in becoming candidates for National Board Certification and 13 were interested in participating in a state funded grant to gain expertise in content literacy development. Moreover, the school offered the only public middle grades Montessori Magnet in the district, a program that focuses on a student-centered, hands-on, and inquiry-based approach to instruction. The entire faculty had completed Montessori training.

With North Point as an SPI-affiliate, a CEHD faculty member with both literacy and a middle school background began serving as the liaison and developing an intentional working relationship with the school. In spring 2012, teachers identified three areas for professional growth, including literacy and the new Common Core State standards, student motivation, and classroom management. This resulted in a summer institute facilitated by the liaison during which teachers developed a deep understanding of the literacy demands of their disciplines and, together with the liaison, built trust and rapport that proved beneficial to the partnership as it expanded.

The following fall, a second CEHD liaison, an assistant professor of middle school social studies education with focused expertise in instructional technology and gifted education joined the team. With the principal's support, the two faculty members alongside their school partners established a CEHD-designated classroom for course instruction and supervision of teacher candidates. The classroom was situated near the principal's office toward the front entrance of the building, commonly a vibrant and visible communal area of a school. Designed as a "model" middle school classroom, CEHD offered three classes in the room that term. Due to existing schedule limitations, all classes met after the middle school day concluded, thus prohibiting embedded engagement of teacher candidates in classrooms with teachers and students.

The presence of CEHD faculty and teacher candidates on the middle school campus continued to grow, and by spring 2013, course offerings held on location increased from three to six. To explicitly remedy the missed opportunities afforded by exposure of teacher candidates to classroom work of teachers and students, half of the university classes offered at the middle school that semester were held during the school day. The advantages of this were readily apparent. For example, one course, Teaching Middle School, included classroom-embedded elements in which teacher candidates spent the first 30 to 45 min with the faculty instructor discussing readings and reviewing focus questions for the day. Candidates then moved to an individually assigned middle school classroom for 60 min where they worked with small groups of students; assisted the teacher with instructional activities; or observed, wrote about and reflected on the teacher's work. Finally, the candidates returned to the university classroom to debrief about the experience and make explicit connections between theory and practice.

Holding university classes at North Point during the day gave candidates rich opportunities to become involved in the working environment and participate in the school's culture. The teacher candidates would arrive to begin the day when the middle school students arrived, interact with the students between classes, eat lunch with them, and attend assemblies and other special events, all of which reflect the authentic work of teachers. These candidates saw and experienced middle school life in real time. In addition, North Point teachers could familiarize themselves with the teacher candidates; university faculty; and the practices, content, and assessments of the teacher preparation program and clinical model.

In late spring 2013, CEHD was awarded a sizeable state grant to support further development and expansion of the clinical model at North Point Middle. The initiative included the continued placement of content methods students with North Point teachers and a larger student teacher presence for clinical experiences at the school. As well, the grant intentionally focused on recruiting and preparing teacher candidates of color, developing teachers' content literacy and capacity for differentiating instruction, and providing academic enrichment opportunities for students. Accomplishing these goals involved activities coordinated by the CEHD Minority Teacher Recruitment Project, a summer content literacy institute, a sequence of gifted education graduate courses at the school, and an array of summer enhancement experiences for middle grades students to help keep them engaged in learning.

Promising indicators of success in the North Point partnership include the expansion of on-site university courses, placements of teacher candidates at the school, planned initiatives for students as previously described, and continued professional development activities. Teachers and university faculty increasingly collaborate on topics of mutual interest and benefit to the school and on ways of addressing identified student needs.

OPPORTUNITIES AND OPPORTUNITY COSTS OF A CLINICAL MODEL

As these descriptions suggest, a clinical approach to teacher education offers numerous opportunities and benefits for all participants, including university faculty, teacher candidates, and classroom teachers. Those benefits, though, can have associated costs. *Opportunity cost* is a term we use to acknowledge how a benefit may have a corresponding trade-off and challenge to consider. Next we note several such examples emerging from our work.

A clinical model that includes locating university classes in a school allows faculty to introduce a concept, theory, or strategy and then immediately send teacher candidates into classrooms where teachers demonstrate effective instructional, assessment, and management practices. This classroom-embedded course delivery enables teacher candidates to make clear, explicit, and immediate connections between theory and practice. Further, they can observe and experience practice in real-time within an authentic context similar to that in which they soon will be employed and benefit from immediate peer and supervisor feedback.

Maximizing the potential of a clinical model, however, calls upon university faculty to spend the additional time necessary to rethink the ways they approach, organize, and deliver coursework. For example, they must redefine course topics and activities to accommodate on-site instructional advantages, alter the learning goals set for their students, infuse new technologies, and assess candidates' contributions and progress in new ways. All of these changes necessitate a reduction of face-to-face instructional time and a corresponding increase in time spent planning, coaching and mentoring the teacher candidates.

Similarly, as candidates have increased involvement in classrooms, teachers have the opportunity for extra adult help and the satisfaction of socializing new colleagues into the profession. They begin to assume an expanded role as coteacher educator instrumentally involved in the education of teacher candidates, and this expansion of their usual role may be professionally empowering and personally rewarding.

However, the time associated with classroom teachers hosting, mentoring, and coaching the teacher candidates is a cost that must be recognized. Teaching is demanding work, and particularly so in an era of high-stakes accountability. In a clinical model, the teachers add to their responsibilities the need for collaborative planning with university faculty around the learning objectives, expectations, and supervision of teacher candidates. Further, they must adjust to sharing control of their classrooms and articulating the reasoning behind their pedagogical decision making and practices. These can be challenging, new experiences for classroom teachers.

Besides instructional and classroom-based issues to consider, the dichotomy of opportunity and related cost is manifested by the expanded role of a university faculty member involved in a clinical model of teacher education. For instance, faculty engaged in such work find themselves spending increased time in teaching, research, and service activities in schools and less time at the university. They become active participants in the school in order to build a successful and mutually beneficial partnership, to understand the nuances of school life, and to provide support when requested. The several related advantages and opportunities include the ability to ground their research and theoretical perspectives in the immediacy of school life, identify authentic examples to integrate into teaching, discover legitimate and timely questions to guide research, and demonstrate responsiveness to community needs.

At the same time, faculty face the expectation of being fully invested in responsibilities on campus. They are occupying two professional spaces simultaneously. Thus, alongside the opportunities are costs associated with their increased presence in the school. Faculty may experience feelings of guilt or isolation because of their separation from their university worksite, which may signify possible role strain or role conflict (Evans-Andris, 1996). If their roles and work within the clinical model are ambiguous and poorly understood by their university colleagues, they can become targets of scrutiny and criticism. In addition, they may perceive that the success of the clinical model at a school site hinges on their singular abilities and feel burdened by such a significant responsibility.

Of critical importance is university support for faculty who embed their teaching, research, and service endeavors in a clinical model of teacher education, especially those aiming toward tenure and promotion. A legitimate time allocation on annual plans of work provides a starting point, yet the conversation must continue about other appropriate ways of honoring faculty's contributions, valuing community-engaged scholarship, and making such efforts more explicitly known and valued by others.

Similarly, principals and districts must recognize that the advantages and opportunities of having university faculty and teacher candidates on-site in their schools also pose associated costs for the classroom teachers who are engaged as partners. Meaningful ways of supporting, acknowledging, and rewarding their work must be a priority in order to sustain the model and to collaborate as key partners on preparing new teachers effectively.

Integral Components of the Clinical Model Across Partnership Sites

Our reflection on the introduction of a clinical model at staggered times across elementary and middle school partnership sites suggests that at least five components may promote and enhance model implementation: (a) collaborative and engaged leadership from both the university and the school site, (b) key personnel willing and committed to carrying out the work of the clinical model, (c) professional development that builds capacity as well as responds to and addresses identifiable goals, (d) targeted space in the school to function as an on-site university designated classroom, and (e) funding to expand and sustain the clinical model.

The importance of engaged, shared leadership in establishing a clinical model for teacher preparation in local schools cannot be overstated. Effective leaders encourage collaboration, collegiality, and norms of mutual influence in the change process (Evans-Andris, 2010). Principals are a critical source for such leadership, and schools may also rely on faculty "champions" (Beath, 1991; Evans-Andris, 1996; Kanter, 1983). In the cases of Bernard Academy, Riverside Elementary, and North Point Middle, leadership teams comprised of the CEHD dean, university faculty liaison, school principal, and others from both the university and the school were instrumental in promoting coherent, sustainable change and lasting innovative behavior. They initiated the conversations leading to implementation and, all the while, advocated for and lent support, involvement, and long-term vision to the educational venture. Working toward common goals, they leveraged resources from their respective institutions that provided the structure for a successful clinical model.

In addition to the direction and support derived from formal leadership, a clinical model partnership depends on key personnel who are willing and committed to being "leaders on the ground" to carry out the related and necessary work. Key personnel from CEHD responsible for implementing the clinical model at the school level included the faculty liaison and additional faculty who either taught classes on-site or visited the schools for purposes of offering professional development, or supervising and otherwise working with teachers and teacher candidates. These faculty assumed roles that crossed workplace boundaries so that their instruction could be embedded in schools, traditionally the domain of the classroom teacher. Key personnel also planned, facilitated, and delivered many of the professional development opportunities for K-12 educators. From the school's perspective, key personnel consisted of the numerous classroom teachers willing to participate in the clinical model by inviting teacher candidates into their classrooms throughout each semester and providing them with important learning experiences. When teachers commit to involvement with the clinical model, they agree to invest time and effort in their own professional growth and that of teacher candidates. Through this work, they are also helping socialize teacher candidates to school culture and to the occupational demands of the profession.

Across all three schools, professional development was a hallmark of the clinical partnership. Research indicates that professional development is most likely to improve knowledge and change classroom practice when it focuses on content, provides opportunities for active learning, shows coherence with other learning activities (Garet, Porter, Desimone, Birman, & Yoon, 2001), and is provided in ways that are considerate of teachers' time and responsive to their needs and concerns (Darling-Hammond & McLaughlin, 1995). As part of the clinical partnership at Bernard Academy, Riverside Elementary, and North Point Middle, CEHD faculty worked with school partners to organize and offer various professional development opportunities in summer as well as throughout the school year in response to school improvement goals, or on topics that school personnel identified as needed growth areas or otherwise requested. Teachers targeted a wide range of topics including literacy, writing across the curriculum, environmental education, common core state standards, and instructional technology. They also addressed pedagogical issues related to student motivation, classroom management, and so forth. The professional development opportunities made possible through the clinical partnerships across the schools underscore the importance of growth and development of teachers as continuous learners, acknowledge and reinforce the professionalism of teaching, and likely increase teacher commitment to support student learning and achievement.

In contrast to Riverside Elementary, the experiences at Bernard Academy and North Point Middle, where building space could accommodate designated classrooms, demonstrated the advantages that such space contributes to the integration of a clinical model. On the surface, it appears as a simple convenience to provide faculty and teacher candidates an on-site location for coursework. At a more fundamental level, however, a dedicated space affords a recognized "command center" or base of operations for all on-site clinical work. The university designated classroom, both at Bernard Academy and North Point Middle, became a space not only where college courses were taught but also where teacher candidates could convene with their professors or with each other to share, discuss, and reflect upon their in-school experiences. It also became a space where college faculty and classroom teachers could meet, share information, recommend and provide resources, demonstrate effective instruction, and network. In short, the university-designated classroom promoted and facilitated a forum for discussing, information sharing, and networking for those engaged in the work of the clinical model. The designated classrooms served as a "marker" integral to the identity of, and in many ways, the successes of the clinical model.

Finally, the clinical model at all three sites was infused with additional funding and technology that enabled the clinical model to flourish, expand, and become a part of the school landscape. It is not uncommon for innovative efforts involving schools to depend on adequate funding. In fact, Giles and Hargreaves (2006) reported that the lack of funding is the single most frequently cited reason contributing to the termination of some innovations because additional funding requirements become difficult for schools or partners to meet. Funding for the initiatives embedded in the clinical model partnerships came from diverse sources including private donors, foundations, state grants, and college funds. The money made possible the expansion of on-site course offerings, a vast array of professional development opportunities for faculty and classroom teachers, embellishments to previously established model components, the implementation of instructional technology, books to complement reading programs for students, support staff, and additional resources. Realizing that funding is essential to the continued growth and expansion of the clinical model, leaders and key personnel in the partnership continue to seek and develop new streams of financial support.

The clinical model partnerships described in this article benefit the elementary and middle schools in many ways, both culturally and organizationally. Positive outcomes include a proactive attitude among educators at the university and the schools toward the partnerships; further integration of the clinical model in the schools; more thoughtful, effectively delivered, and well-attended professional development opportunities; an increased number of classroom teachers hosting teacher candidates to observe, assist, and otherwise participate in activities in their classrooms and beyond; and increased collaborative efforts among faculty and classroom teachers to enhance the preparation of teacher candidates. Other measureable outcomes associated with these clinical partnerships include an increased number of classroom teachers seeking and completing National Board Certification, a reduction in teacher turnover, and a willingness on the part of school principals to hire new teachers who were trained at their schools.

Partnerships may attain such positive outcomes when the five components just described are in place. This structure applies to differing school contexts—urban, suburban, or rural—each of which could become a viable partner with a nearby university for the development and implementation of a clinical model. The determination of how schools and universities become partners resides with their intent, commitment, and resources.

Systematic research assesses the benefits of the clinical model for all participants as well as the extent to which model components promote the integration or sustainability of a clinical partnership. The following section considers ways of addressing these questions and others.

RESEARCH AS A NEXT STEP

Over the last decade, and particularly since the release of NCATE's (2010) Report of the Blue Ribbon Panel, colleges of education, together with local schools, have begun developing and introducing clinical models for teacher preparation. However, much of the data about these programs and their impact on teacher development and student achievement are still at the anecdotal level. For the programs to flourish and better meet the goal of producing highly qualified teachers who are committed to the profession, we must explore and seek answers to important questions about clinical model implementation and outcomes through ongoing systematic research.

In the clinical model partnerships discussed in this article, the school principals, project faculty, and others have posed questions to which they seek answers. These questions range from basic practical questions regarding implementation strategies to sophisticated questions pertaining to causal relationships between model components and educational outcomes. Many of these questions are folded into a formative evaluation research project which presently is under way at the North Point Middle School. The study relies on qualitative field observation in the school and classrooms and in-depth interviewing of participants and key players. Researchers combine these data with the analysis of quantitative measures to identify and more deeply understand components of the clinical model that promote successful application such as those identified in the previous section. The research may also inform us about the conditions and strategies necessary for effective integration and sustainability of clinical partnerships between a college of education and schools. The study is projected to extend over several years or more. By collecting data that track participants over time, the longitudinal research will inform the ways and extent to which the clinical model improves preparation for teacher candidates. Ultimately, by examining causal relationships it will address the model's effectiveness on teacher candidates' rate of successful certifications, and their job satisfaction and retention in the early, critical years of teaching. As the clinical model becomes integrated and sustained in the school setting, longitudinal data may also inform additional causal relationships such as the extent to which it affects student achievement.

Research on clinical model partnerships addressing issues just posed will be most useful when conducted in concert with those engaged in the applied work. Hallinan (1996) noted that researchers and K-12 educators commonly have different agendas, which often results in a gap between empirical research and pedagogical practice. Coburn, Penuel, and Geil (2013) recommended that researchers and practitioners form long-term and mutually collaborative partnerships to investigate problems of practice and solutions for improving district outcomes. Together, the partners in such arrangements negotiate questions, conduct research, and contribute to the analysis of data. To increase the utility of basic and applied research and to better inform educational practice, research findings must be timely, easily accessible, and readily understandable and interpreted, and must account for contextual pressures within which the schools operate that may affect outcomes. Further, they must be reported in appropriate forms for intended audiences, including educators, districts, and other stakeholders, to inform policy and improve practice (Coburn et al., 2013; Epstein, 1996; Hallinan, 1996).

Clinical model partnerships may also be informed by *action research* in which practitioner-researchers conduct systematic inquiry about their own professional practice. Whether conducted by university faculty who instruct teacher candidates or by classroom teachers who engage the candidates in their own instruction, high-quality action research promotes reflection and decision making for the purpose of informing and improving one's own strategies, practice, and understanding. The results of action research contribute to more effective classroom teaching and learning experiences, enhance the professional learning culture among educators (Parsons & Brown, 2002; Sagor, 2000), and increase the effectiveness of the clinical model partnership.

Ultimately, it is imperative to trace the process of development and effects of the clinical partnership for teacher preparation to more fully understand it and the promise it holds for improved practice and sustainability. Data that address the implementation and effects of a clinical model, collected over time, would provide an in-depth and comprehensive documentation of the overall process of how a clinical model shaped by national policy plays out as it is implemented at the school level. Such data would also inform effects on teacher candidates and teachers, particularly those in early stages of their career.

Finally, the potential of "exportability" or "scale up" of the model, designed by educators at a College of Education in partnership with local school administrators and teachers, should be explored. Findings from such analyses have important implications regarding the effectiveness of a clinical partnership for teacher preparation in schools beyond one district and can add to the literature as it inform teacher educators, practitioners, and education decision makers.

AUTHOR BIOS

Melissa Evans-Andris, Ph.D., is the Associate Dean for Research and Graduate Studies with the College of Education and Human Development at the University of Louisville. She is a sociologist of education and has published numerous articles and two books on topics including school improvement, school reform, and educator preparation.

Diane W. Kyle, Ed.D., is the co-editor of this special issue. She serves as the Director of the Nystrand Center of Excellence in Education and as Chairperson and Professor in the Department of Early Childhood and Elementary Education in the College of Education and Human Development at the University of Louisville. In addition to other published articles and books, she has co-edited two previous theme issues of the *Peabody Journal of Education*, one on Action Research and one on Professional Development Schools.

Ann E. Larson, Ph.D., is the co-editor of this special issue. She is currently the Dean of the College of Education and Human Development at the University of Louisville. She has served in several significant leadership roles in the field of education and teacher preparation including her role as the immediate past president of KACTE. She is a Professor in the Department of Middle and Secondary Education.

Harrie Buecker, Ph.D., is liaison for District and School Partnerships, Director of Educator Development and Clinical Practice in the Nystrand Center of Excellence in Education at the University of Louisville. She works with leadership in local school districts on professional development for teachers and administrators and leads the work at the College of Education and Human Development's clinical model sites.

W. Blake Haselton, Ph.D., is a former acting Dean of the College of Education and Human Development at the University of Louisville. He is currently a faculty member in the Department of Leadership, Foundations and Human Resource Education and serves as superintendent in residence. He has received numerous national and state awards for his P-12 educational administrative leadership in education and his work and contributions in higher education.

Penny B. Howell, Ed.D., is an Associate Professor in the Department of Middle and Secondary Education at the University of Louisville. She has received numerous teaching awards and has produced and contributed to several publications on the topic of teacher preparation and middle grades education.

Caroline Sheffield, Ph.D., is an Assistant Professor in the Middle Secondary Education Department at the University of Louisville. She specializes in social studies education and the uses and applications of new technologies in teaching and learning and has produced and contributed to journal articles on the topic of teaching social studies.

Christine Sherretz, Ed.D., is an Instructional Systems Specialist for the Department of Defense Schools in the Kentucky District. She has over 20 years of teaching experience in P-12 settings and higher education.

Ingrid Weiland, Ph.D., is a former Assistant Professor in the College of Education and Human Development at the University of Louisville. Her professional focus is on the effective teaching of elementary science.

REFERENCES

American Association of Colleges for Teacher Education. (2010, March 11). *The clinical preparation of teachers: A policy brief. Teacher preparation: Who needs it? The clinical component.* Washington, DC: National Press Club.

Beath, C. (1991). Supporting the information technology champion. *Management Information Systems Quarterly, 15,* 355–370.

Coburn, C., Penuel, W., & Geil, K. (2013). *Research-practice partnerships: A strategy for leveraging research for educational improvement in school districts.* New York, NY: William Grant Foundation.

Cochran-Smith, M. (2004). Stayers, leavers, lovers, and dreamers: Insights about teacher retention. *Journal of Teacher Education, 55,* 387–392.

Council for the Accreditation of Educator Preparation. (2013). *Council for the Accreditation of Educator Preparation Report to the Public, the States, the Policymakers, and the Education Profession.* Retrieved from http://caepnet.files.wordpress.com/2013/05/annualreport_final.pdf

Darling-Hammond, L. (2003). Keeping good teachers. *Educational Leadership, 60*(8), 6–13.

Darling-Hammond, L. (2005, November). Teaching as a profession: Lessons in teacher preparation and professional development. *Phi Delta Kappan,* pp. 237–240.

Darling-Hammond, L., & McLaughlin, M. W. (1995). Policies that support professional development in an era of reform. *Phi Delta Kappan, 76*, 597–604.

Epstein, J. L. (1996). New connections for sociology and education: Contributing to school reform. *Sociology of Education, 69*, 6–23.

Evans-Andris, M. (1996). *An apple for the teacher: Computers and work in elementary schools.* Thousand Oaks, CA: Corwin Press.

Evans-Andris, M. (2010). *Changing for good: Sustaining school improvement.* Thousand Oaks, CA: Corwin.

Garet, M. S., Porter, A. C., Desimone, L., Birman, B. F., & Yoon, K. S. (2001). What makes professional development effective? Results from a national sample of teachers. *American Educational Research Journal, 38*, 915–945.

Giles, C., & Hargreaves, A. (2006). The sustainability of innovative schools as learning organizations and professional learning communities during standardized reform. *Educational Administration Quarterly, 42*, 124–156.

Greenwood, D. J., & Levin, M. (2003). *Introduction to action research: Social research and social change.* Thousand Oaks, CA: Sage.

Hallinan, M. (1996). Bridging the gap between research and practice. *Sociology of Education, 69*, 131–134.

Ingersoll, M. R. (2001). Teacher turnover, teacher shortages, and the organization of schools. *American Educational Research Journal, 38*, 499–534.

Kanter, R. (1983). *The change masters.* New York, NY: Simon and Schuster.

National Council for Accreditation of Teacher Education. (2001). *Standards for professional development schools.* Washington, DC: Author.

National Council for Accreditation of Teacher Education. (2010). *Transforming teacher education through clinical practice: A national strategy to prepare effective teachers.* Report of the Blue Ribbon Panel on Clinical Preparation and Partnerships for Improved Student Learning. Washington, DC: Author.

Norton-Meier, L., Hand, B., Hockenberry, L. & Wise, K. (2008). *Questions, claims, and evidence: The important place of argument in children's science writing.* Portsmouth, NH: Heinemann.

Parsons, R. D., & Brown, K. S. (2002). *Teacher as reflective practitioner and action researcher.* Belmont, CA: Wadsworth/Thomson Learning.

Sagor, R. (2000). *Guiding school improvement with action research.* Alexandria, VA: Association for Supervision and Curriculum Development.

Sherretz, C., & Kyle, D. (2011). Improved learning for all partners: A school/university partnership for teacher preparation, teacher development, and student achievement. In J. Nath, I. Guadarrama, & J. Ramsey (Eds.), *Investigating university-school partnerships* (pp. 389–402). Charlotte, NC: Information Age.

Zembal-Saul, C., McNeill, K. L., & Hershberger, K. (2013). *What's your evidence? Engaging K-5 students in constructing explanations in science.* New York, NY: Pearson, Allyn & Bacon.

PEABODY JOURNAL OF EDUCATION, 89: 482–499, 2014
Copyright © Taylor & Francis Group, LLC
ISSN: 0161-956X print / 1532-7930 online
DOI: 10.1080/0161956X.2014.938996

Routledge
Taylor & Francis Group

Exploring the Influences of a Partner-Based Teacher Credential Program on Candidates' Performance Outcomes

Elizabeth A. van Es, Judith Haymore Sandholtz, and Lauren M. Shea
University of California, Irvine

The study compared candidates in a 4-year undergraduate program for secondary mathematics and science teaching, based on the UTeach model, with candidates in a 1-year postbaccalaureate program at the same institution. Candidates in the undergraduate program participated in a partnership of university mathematics, science, and education departments and intensive field-based experiences in high-needs schools. We conjectured that this approach would better prepare prospective teachers to develop beginning teacher competencies. Analysis of the Performance Assessment for California Teachers Teaching Event identified few differences between candidates in both groups. Surveys revealed significant differences between candidates' perceptions of their preparation for teaching. These findings suggest that different program models can offer differential support to prospective teachers but how the program features are enacted influences the impact that these programs have on teacher preparation.

Schools of education have faced increased criticism for not preparing teachers for the demands of the profession (Darling-Hammond, 2010; Grossman & McDonald, 2008). Key issues at the core of this criticism include (a) teacher preparation focuses too much on theory about teaching and learning and too little on developing prospective teachers' practice-based knowledge; (b) preservice teachers have little preparation in contexts that will help them learn to support a range of learners and provide equitable learning opportunities to all students; (c) preservice teachers are placed in classrooms with ineffective teachers, in schools that are often failing students; and (d) the programs do not adopt innovative practices or develop institutional capacity that prepare future teachers to teach in the 21st century (Darling-Hammond, 2006, 2010). In response, reform efforts that seek to improve teacher education have called for a fundamental shift in teacher preparation, with greater attention to learning how to teach through increased participation in the field observing and teaching in real classrooms (Ball & Forzani, 2009; Grossman & McDonald, 2008). Simply spending more time in the field, however, will not in itself change the quality of teacher preparation (Valencia, Martin, Place, & Grossman, 2009). Rather, how this time is structured and the kinds of opportunities that preservice teachers have to learn to teach during these experiences will influence the extent to which they are well prepared to enter the profession.

The purpose of this study is to explore the influence of one effort to reform teacher education that involves greater participation in classroom settings and a shift in the instructional focus in

---

Correspondence should be sent to Elizabeth A. van Es, School of Education, University of California, Irvine, 3455 Education, Irvine, CA 92697. E-mail: evanes@uci.edu

university coursework. This program, housed at a large public university in California, is one of 35 scale-up sites for the UTeach teacher education initiative (The UTeach Institute, 2013). The UTeach teacher preparation program originated at the University of Texas at Austin to recruit undergraduate science, mathematics, and computer science majors and prepare them to become exemplary science, technology, engineering, and mathematics (STEM) teachers. Based on its initial success in increasing the number of certified STEM teacher graduates, the program received support from several agencies to scale up its approach across the country. A key characteristic of this program is that it brings together partners at the university and school district sites to provide field-based learning experiences that are coordinated with pedagogically rich university coursework focused on the intersection of teaching, learning, and content. We view two core components of this program as central to the design to promote successful teacher preparation. One is the intensive field-based component that extends over the course of the program in carefully selected classrooms with mentor teachers whose teaching intends to align with program goals. The second is the role of the university-based master teacher who identifies mentor teachers for field placements, coteaches the university courses, and supervises students in the field as they enact what they learn in their coursework. We speculate that these programmatic features play an important role in preparing teacher candidates in a 4-year undergraduate program to develop beginning teacher competence. Moreover, we conjecture that the partnerships within the university (i.e. Colleges of Education, Liberal Arts, and the Sciences), as well as between the university and school-based sites that are unique to the UTeach program, afford a carefully designed course of study and mentorship that may better equip prospective teachers to enact ambitious teaching practices (Lampert, Beasley, Ghousseini, Kazemi, & Franke, 2010; Windschitl, Thompson, & Braaten, 2011).

To explore this program's influence on candidates' preparation for secondary mathematics and science teaching, we compare candidates in the 4-year undergraduate program with candidates in a 1-year postbaccalaureate (postbac) program at the same institution. We specifically address three research questions: (a) Do teacher candidates' scores on a summative teaching performance assessment vary across the two programs? (b) To what extent do teacher candidates in each program implement ambitious mathematics and science teaching practices? (c) To what extent do candidates' perceptions about the effectiveness of their preparation for classroom teaching vary across the two programs?

THEORETICAL FRAMEWORK

We draw on two lines of research to frame this study. The first relates to the goals of ambitious mathematics and science teaching, and the second relates to the role of partnerships in teacher education.

Ambitious Mathematics and Science Teaching

In the last 20 years, mathematics and science education research has made progress in documenting the knowledge and practices that teachers need to support learners in developing deep and rich understandings in these content areas (National Research Council [NRC], 2001, 2007). In mathematics, for example, this vision of instruction, referenced recently in the literature as *ambitious teaching*, calls on teachers to design high-quality, cognitively demanding tasks and to orchestrate meaningful discussions where students engage in mathematical reasoning to develop procedural fluency and conceptual understanding (Lampert et al., 2010; Smith & Stein, 2011). In addition, this vision of teaching seeks to support students in developing productive dispositions in mathematics, where students see mathematics as useful and worthwhile and develop identities as mathematics learners and doers (NRC, 2001). Similarly, calls for improving science education emphasize students learning to collect, interpret, and evaluate evidence to formulate scientific explanations of observed phenomena (American Association for the Advancement of Science, 2009; Duschl, 2008; NRC, 2007, 2012; Windschitl, Thompson, & Bratten, 2008). This approach to science instruction focuses on the processes for doing science such that the discourse of a science classroom is on making the case for "how we know what we know and why we believe it" (Duschl, 2008, p. 269). Thus, science is less about experimentation and more about explanation and model building in which individuals ask critical questions and develop appropriate skepticism about proposed explanations of scientific phenomena (Duschl, 2008). Engaging in this kind of scientific work requires that students learn to construct and evaluate arguments and participate knowledgeably in public discussions about science and technology (NRC, 2012; Ryu & Sandoval, 2012), as well as become critical consumers of scientific data by attending to and reasoning about scientific ideas, evaluating evidence for scientific claims, generating and testing models of scientific phenomena, and becoming effective problem solvers (American Association for the Advancement of Science, 2009; Duschl, 2008; NRC, 2007, 2012).

This instructional vision places many new demands on teachers. Teachers need to learn to design and enact tasks that make student thinking visible, as well as enact practices for orchestrating meaningful discussions around student work. To engage students in such conversations, in which they conjecture, explain, reason about, and construct arguments about mathematics and scientific phenomena, students and teachers need to create new forms of participation. In mathematics, this might involve a teacher posing a problem and then allowing students time to struggle with the problem, inviting several students to share their solution strategies, and comparing and contrasting their strategies to develop a deep understanding of mathematical concepts (Hiebert & Grouws, 2007; Smith & Stein, 2011). For science, this approach includes asking students to model scientific phenomenon, to seek evidence to support or refute the model, and then to construct an argument in which evidence confirms or refutes the model and alternative models are explored (Duschl, 2008; Windschitl et al., 2008). The idea is that through such activities students learn relevant content while developing both the language and practices for participating in the discipline.

An important dimension of this approach is gaining insight into the range of student thinking that emerges during instruction and using student ideas to inform future instructional decisions both in the moment of a lesson and in subsequent lessons (Lampert et al., 2010). Although it is not common practice for teachers to design instruction to gain insight into student thinking or to attend to student thinking while teaching (Jacobs, Lamb, & Philipp, 2010), both student and teacher learning benefit from such practice (Franke, Carpenter, Levi, & Fennema, 2001; Saunders, Goldenberg, & Gallimore, 2009). Moreover, learning to attend to the particulars of student thinking can support teachers in adopting a more student-centered approach to teaching and developing a student-centered frame for instruction (Levin, Hammer, & Coffey, 2009). Research suggests that it can be particularly challenging for preservice teachers to enact this vision of instruction (Lienhardt & Steele, 2005; Stein, Engle, Smith, & Hughes, 2008). However, recent reform efforts offer models for preparing prospective teachers to meet these demands, as we describe in the following section.

The Role of Partnerships in Preservice Teacher Education

Calls for the improvement of teacher preparation propose that teacher education be grounded in practice (AACTE, 2010; Grossman & McDonald, 2008). Research finds that preparation programs directly focused on teaching practice benefit teachers in their 1st year of teaching (Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2009), and several approaches have been advocated for a practice-based pedagogy for teacher education (Darling-Hammond, 2006; Lampert et al., 2010). In both mathematics and science education, researchers have defined a set of research-based practices and accompanying tools for beginning teachers that are limited in number but provide an instructional core that guide beginning teachers in achieving this vision of teaching (Franke & Chan, 2007; Lampert et al., 2010; Windchitl et al., 2011). Others advocate for developing preservice teachers' abilities to learn in and from their teaching—with less emphasis on the core instructional practices and more on skills for learning to learn from one's practice in systematic ways (Hiebert, Morris, Berk, & Jansen, 2007). A third approach focuses on developing organizational capacity by cultivating school–university partnerships that situate the work of teacher education in carefully selected schools and providing preservice teachers with opportunities to learn from content experts, teacher educators, exceptional mathematics and science teachers, and school leaders (Darling-Hammond, 2006). Darling-Hammond (2006) identified several essential features for building effective partnerships: *coherence and integration* among courses and between courses and clinical experiences in schools; *extensive, well-supervised clinical experiences linked to coursework using pedagogies that link theory and practice* in schools with diverse student populations; and *new relationships with schools*. In this model, teacher education is treated as a coordinated system that draws on the expertise of many to provide prospective teachers with a coherent program grounded in the work of teaching (Thompson, Windschitl, & Braaten, 2013). Few studies examine the influence that such models of teacher education have on preservice teachers, particularly as they attempt to enact ambitious teaching practices in mathematics and science (see Thompson et al., 2013, for an exception). In this study, we explore this question by examining the influence that a partner-based undergraduate teacher preparation program has on prospective STEM teachers.

The UTeach model for teacher education that we investigate in this study is designed to provide a coherent, integrated teacher education program with extensive, intensive field-based experiences carefully mentored by university and school-based faculty. Faculty members from Schools of Education and the Arts and Sciences at the university provide instructional experiences to develop content knowledge for teaching. In addition, exceptional teachers from local K-12 schools become university instructors who coordinate and supervise field-based experiences in selected local schools with teachers who intend to adopt ambitious mathematics and science pedagogy. We seek to investigate how a program that consists of these features prepares future teachers for this challenging work.

METHODS

Study Context

This study takes place at a large public university in California that houses two distinct teacher credential programs. One is a postbac credential program that consists of three quarters of coursework and field-based experiences. Candidates take courses each quarter in the following strands: Learning from Teaching; Human Development and Theory; Pedagogy and Content Knowledge; Language, Literacy, and Technology; and Professional Conduct and Policy. Across all strands is a focus on learning relevant theory and content knowledge, as well as a field-based component for bridging theory and practice in school settings. In the first quarter, candidates are assigned a school-based field placement, where they observe one class and then take on increased responsibility over the 3-month period. In the second quarter, they continue taking courses at the university and begin their student teaching experience, teaching two sections of the same course (e.g., Algebra I or Earth Science) while also being placed in a third class in which they experience working with diverse student populations, such as a special education course or a class specifically focused on supporting English Language Learners. In the third quarter, with coursework mostly completed, they focus primarily on student teaching.

The second program is a 4-year undergraduate credential program modeled after the UTeach teacher preparation program. Central features of this program include (a) extensive collaboration between Colleges of Education and those responsible for administering science and mathematics degrees; (b) master teachers who have exemplary secondary teaching experience in the roles of clinical faculty; (c) research-based instruction to develop deep content knowledge and build strong connections between theory, practice, and content; and (d) continuous field experiences that are carefully structured to promote learning effective teaching practices in STEM education (The UTeach Institute, 2013). During the 4-year program, undergraduate students have multiple opportunities to participate in classrooms, with each course providing increased opportunities for students to learn about and employ research-based teaching strategies in K-12 contexts. They begin their field experiences in elementary classrooms, then move to middle school contexts, and ultimately observe and teach in high school settings. This approach provides candidates with opportunities to understand the progression and development of mathematics and science concepts from the early elementary years through high school. Students also complete a sequence of courses in their 3rd and 4th years, based on the UTeach model, in the following strands: theories of knowing and learning in mathematics and science; approaches to analyzing, enacting, and assessing classroom interactions in mathematics and science classrooms; methods for designing instruction for English Language Learners in the content areas; and methods for designing complex instruction in mathematics and science to promote equitable opportunities in secondary classrooms. Students apply research-based theories and frameworks to observation and analysis of mentor teachers' practice (Boaler & Humphreys, 2005; Smith & Stein, 2011; Windschitl et al., 2008), and with support from both university-employed master teachers and school-based

TABLE 1
Focus of Guiding Questions in Performance Assessment for California Teachers Rubrics

Focus of Guiding Questions	Category
Q1: Establishing a balanced instructional focus	Planning
Q2: Making content accessible	
Q3: Designing assessments	
Q4: Engaging students in learning	Instruction
Q5: Monitoring student learning during instruction	
Q6: Analyzing student work from an assessment	Assessment
Q7: Using assessment to inform teaching	
Q8: Using feedback to promote student learning	
Q9: Monitoring student progress	Reflection
Q10: Reflecting on learning	
Q11: Understanding language demands and resources	Academic language
Q12: Expanding students' academic language repertoire	

mentor teachers, they participate more centrally in classrooms, designing and teaching lessons and reflecting on their teaching effectiveness.

Participants

Participants in the study were candidates who were preparing to teach mathematics or science at the secondary level and who completed their credential program and the summative performance assessment during the 2011–12 and 2012–13 academic years. Over this 2-year period, the pool included 23 candidates in the 4-year undergraduate program and 83 candidates in the 1-year postbac program. The candidates in the undergraduate program were the first two cohorts to complete the program in its entirety at this university.

Data Sources

Data for the study come from two main sources: (a) the Performance Assessment for California Teachers (PACT) Teaching Event, and (b) an exit survey of candidates. The PACT Teaching Event is a portfolio assessment for California teachers that measures preservice teachers' ability to plan, teach, assess, and reflect on a lesson sequence (Pecheone & Chung, 2006). Candidates submit (a) a description of the school context to situate the lesson plan and analysis of teaching, (b) lesson plans for a 3- to 5-day teaching sequence with accompanying assessments and student work, (c) two edited video clips for a combined total of 15 to 20 min along with commentary and analysis of instruction, (d) example assessments and samples of student work, and (e) reflections for the entire lesson segment. The Teaching Event involves subject-specific assessments of candidates' competency in five categories: planning, instruction, assessment, reflection, and academic language. The content-specific scoring rubrics are organized around two or three guiding questions for each category. Table 1 identifies the focus of the questions within each of the five categories at the time of data collection.

For each question, the scoring rubric includes descriptions of performance for each of four levels or scores. Level 1, the lowest level, is defined as not meeting performance standards, and candidates need additional student teaching experience before they will be considered ready to lead a classroom. Level 2 is considered an acceptable level of performance. These candidates are judged to have adequate knowledge and skills with the expectation that they will improve with more support and experience. Level 3 is defined as an advanced level of performance on the standards relative to most beginners. Candidates at this level are judged to have a solid foundation of knowledge and skills. Level 4 is reserved for stellar candidates who demonstrate an outstanding and rare level of performance for a beginning teacher. Trained scorers of the PACT Teaching Event participate in training and meet a calibration standard each year. Candidates earn a score of 1 to 4 for each of the 12 questions, resulting in total possible scores that range from 12 to 48.

Candidates in both programs completed the PACT Teaching Event as part of the state licensing requirements. To compare candidates' performance on the summative assessment as well as their classroom teaching practices, we collected four sources of evidence from their PACT Teaching Events: (a) total scores, (b) scores on each of the 12 questions, (c) pass/fail determinations, and (d) video clips of classroom instruction.

The exit survey, developed by the School of Education program evaluation team, is administered to all candidates at the conclusion of their specific program. The survey asks candidates to rate how prepared they feel to perform a series of identified tasks as a beginning teacher on a 4-point Likert scale that ranges from *poorly prepared* to *very well prepared*. The main portion of the survey consists of 33 questions grouped into six domains that correspond with the teaching performance expectations: (a) making subject matter comprehensible to students, (b) assessing student learning, (c) engaging and supporting students in learning, (d) planning instruction and designing learning experiences for students, (e) creating and maintaining effective environments for students learning, and (f) developing as a professional educator. An additional question focuses on an overall evaluation of the candidates' preparation. Another section includes 12 statements focused on candidates' personal views about the professional environment of the credential program. These survey items include a 5-point Likert scale that ranges from *strongly disagree* to *strongly agree*. A final, open-ended question asks candidates to add comments about their experience in the teacher credential program.

Data Analysis

Data analysis took place in three phases, each related to one of the three research questions. In the first phase, we compared candidates' performance on the PACT by examining total scores, scores on individual questions, and pass/fail determinations for all 106 candidates: 23 in the undergraduate program and 83 in the postbac program. For each program, we calculated means and standard deviations for the individual questions, the total score, and the number of failing students. Based on the mean and standard deviation of all candidates from both cohorts ($M = 29.67$, $SD = 5.67$), we grouped candidates in four ranges. Thus, we determined the number of students per cohort whose score fell 1 *SD* above and below the average and 2 *SD* above and below the average. To examine the extent to which student performance on the PACT Teaching Event varied by program, we compared the percentage of students scoring in each of the total score ranges. In addition, for each program, we determined the minimum and maximum score per question. Then, to determine statistical differences between students' scores from each program, we performed *t* tests for independent samples. We conducted tests to determine the mean differences between the groups on individual questions, total scores, and percentage of students failing. Confidence intervals were also produced by this analysis.

In the second phase, we compared the teaching practices of a subset of candidates in each program. We conducted a randomized sample from each of the four total scores ranges (16–22, 23–29, 30–36, 37–48) and from each of the content disciplines. With the exception of the 16-to-22 range, this randomized selection resulted in identifying one candidate with a math concentration and one with a science concentration in each range and program. Data for this analysis consisted of the videos of teaching submitted as part of the PACT Teaching Event. The mathematics candidates were required to submit one or two video segments that lasted no longer than 20 min total and that demonstrated how candidates engaged students in understanding mathematical concepts, procedures, and reasoning. The science candidates submitted two segments no longer than 20 min total. The first clip captured how the candidates facilitated students' engagement in meaningful scientific thinking during a scientific inquiry that involved collecting data or selecting data collected by others. The second clip depicted how the candidates actively engaged students in analyzing, interpreting, and synthesizing the results of that inquiry. The PACT Teaching Event prompted candidates to include clips that illustrate interactions between and among the candidate and the students, as well as candidate responses to student comments, questions, and needs.

We coded the videos using an adapted framework that characterized teaching practices for noticing student thinking during instruction (van Es & Sherin, 2010). We analyzed the videos for three areas of teaching practice related to attending to and responding to student ideas, Making Student Thinking Visible, Pursuing Student Thinking, and Responding to Student Thinking During Instruction (see Table 2). We focused on exchanges related to eliciting and exploring student thinking for two reasons. First, attention to student thinking as it unfolds in a lesson is a core component of ambitious mathematics and science instruction. Second, both credential programs included courses that emphasized candidates learning to attend to student thinking and to use student thinking to make judgments about the effectiveness of instruction (Santagata & van Es, 2010). The first dimension, Making Student Thinking Visible, concerned candidates noticing that students had noteworthy ideas and making them public, as well as eliciting ideas from multiple students in small group and whole class discussions. The second dimension, Pursuing Student Thinking, reflected candidates' efforts to pursue student ideas and engage in extended discourse around these ideas by pressing on student thinking and asking students to elaborate on their explanations. The third dimension, Responding to Student Thinking During Instruction, captured adaptations that a candidate made to a lesson based on a student idea that emerged during instruction. Each dimension consisted of several subcategories, resulting in nine categories for analysis.

We divided the videos into 2 min segments, and the first author and another researcher coded the videos for confirming evidence of the nine teaching practices within each segment (Borko, Jacobs, Eiteljorg, & Pittman, 2008; van Es & Sherin, 2010). Initial interrater reliability across the nine practices was 75%. The two coders discussed differences in coding until consensus was reached. We calculated a percentage of overall enactment for each candidate for each of the nine categories, and then we compared the mean percentages of the two groups by using an independent samples *t* test to determine any statistically significant differences.

TABLE 2
Teaching Strategies for Attending to Student Thinking

Making Space for Student Thinking	Recognize a student has an idea	"Maria has an idea to share."
	Associate idea with particular students	"Jason thinks that as temperature increases, volume increases as well."
	Give students time to think	"Let's take a minute to think about this."
	Reiterate a student idea for discussion	"What do people think about Gavin's idea - to multiply all the cubes in the figure and then subtract them from the total number?"
	Elicit ideas from multiple students	"What are some other explanations for what's going on here?"
Pursuing Student Thinking	Probe student thinking	"Why do you think increasing the temperature causes an increase in the volume?"
	Ask students to explain reasoning	"Would that strategy always work?"
Responding to Student Thinking	Attend to student confusion and posing an alternative idea	"Could it be that another gas is being produced? What would that mean about the volume that the gas takes up?"
	Adapt the lesson for the whole class based on an individual student idea	"I saw that some students thought the answer was 6 and others thought it was 2/3. Let's think about these two ideas."

In the third phase, we examined candidates' perceptions about the effectiveness of their preparation for classroom teaching by analyzing their responses on the exit survey. To make comparisons across programs, we calculated and compared mean ratings for each group on each question. Upon noticing a trend in the "developing as a professional educator" domain, we conducted an independent *t* test for each question in that domain to determine any statistical significance of the differences.

RESULTS

In the following sections, we present the results for each research question. We first present data about candidates' scores on the performance assessment and report comparisons across the program groups. We then report the extent to which candidates implemented teaching practices that were responsive to student ideas. Finally, we present comparisons about candidates' perceptions about the effectiveness of their preparation for classroom teaching.

TABLE 3
Performance Assessment for California Teachers Score Results and Ranges (in Points) for Undergraduate and Post-Baccalaureate Candidates

Variable		Undergraduate[a]		Postbaccalaureate[b]			95% CI	
		M	SD	M	SD	*p*	LL	UL
Planning	Q1	2.87	.76	2.81	.59	.72	−.29	.41
	Q2	2.52	.66	2.58	.70	.72	−.38	.26
	Q3	2.70	.56	2.75	.54	.70	−.32	.21
Instruction	Q4	2.13	.76	2.43	.72	.10	−.66	.06
	Q5	2.39	.84	2.59	.77	.31	−.59	.20
Assessment	Q6	2.39	.84	2.42	.63	.87	−.42	.35
	Q7	2.04	.37	2.24	.67	.07	−.41	.02
	Q8	2.22	.80	2.52	.70	.08	−.64	.04
Reflection	Q9	2.52	.79	2.51	.69	.93	−.35	.38
	Q10	2.48	.79	2.46	.70	.91	−.35	.39
Academic language	Q11	2.17	.49	2.31	.62	.26	−.39	.11
	Q12	2.26	.54	2.31	.62	.69	−.32	.21
Total score		28.70	5.8	29.93	5.64	.37	−3.99	1.53
% failed		13.04	34.4	9.64	29.7	.67	−.13	.19

[a]$n = 23$. [b]$n = 83$.

Performance on PACT

Our findings show few differences between the groups in terms of performance on the PACT. As displayed in Table 3, there were no statistically significant differences for total score means between the two groups. The total score mean was 28.70 for the undergraduate group and 29.93 for the postbac group. There also were no statistically significant differences between the two groups for mean scores on any individual question. Although a slightly higher percentage of candidates in the undergraduate group than the post-bac group failed the performance assessment, the difference was not statistically significant.

As displayed in Table 4, the ranges in total scores and scores on individual questions were similar for both groups of candidates. Total scores for candidates in the undergraduate program ranged from 16 to 40, out of a possible 48, and from 18 to 45 for post-bac candidates. For the postbac group, scores ranged from a failing score of 1 to the highest score of 4 on each of the 12 individual questions. In the undergraduate group, scores similarly ranged from 1 to 4 on the majority of the individual questions. However, none of the undergraduate candidates received a

TABLE 4
Range of Scores (in Points)

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Total
Undergraduate[a]	1–4	2–4	2–4	1–4	1–4	1–4	1–3	1–4	1–4	1–4	1–3	1–3	16–40
Postbaccalaureate[b]	1–4	1–4	1–4	1–4	1–4	1–4	1–4	1–4	1–4	1–4	1–4	1–4	18–45

[a]$n = 23$. [b]$n = 83$.

failing score of 1 on two of the planning questions (Making Content Accessible; Designing Assessments), and none received a score of 4 on one instruction question (Using Assessment to Inform Teaching) and the two academic language questions (Understanding Language Demands; Expanding Students' Academic Language Repertoire).

We also examined the candidates' total scores in each of four score ranges and found that the percentage in the lowest and highest total score ranges is similar for both groups. In the undergraduate group, 8.7% of candidates received total scores between 16 and 22 compared to 9.6% in the postbac group, and 12.5% of undergraduate candidates scored in the highest range compared to 13.3% of postbac candidates. For the postbac group, the same percentage of candidates (38.6%) scored between 23 and 29 points as between 30 and 36 points. However, for the undergraduate group, a higher percentage of candidates (60.7%) scored between 23 and 29 than between 30 and 36 (17.4%). These findings suggest that the two groups of candidates were accomplishing the same levels of competence through participation in their respective programs. Given the intensive field-based component of the undergraduate program, we wondered if differences would arise in the particulars of their teaching practice. We present these findings in the following section.

Teaching Practices

The second research question concerned the extent to which teacher candidates in each group implemented ambitious mathematics and science teaching practices, with a particular focus on attending to and taking up student ideas during instruction. Similar to the analysis of the PACT scores, the analysis of teaching practices revealed no significant differences in eight of the nine categories (see Table 5).

Table 5 shows that, for all categories, candidates in both cohorts adopted these practices in less than 25% of the 2 min intervals. Although the practices did not occur in most of the 2 min intervals, when taken together in an instructional interaction, there is evidence that candidates in both cohorts sought to elicit student ideas from multiple students, probe student thinking, and attend to student confusion and pose alternative ideas to clarify student thinking. However, a comparison of the two groups shows a trend of the postbac candidates enacting more of these practices, with a greater percentage of segments in which they recognized particular student ideas, probed student thinking, asked students to explain their reasoning, and responded by posing an alternative idea. Moreover, we observed a statistically significant difference ($p < .05$) between the two groups for one practice, *asking students to explain their reasoning*. This suggests then that although neither group took up these practices extensively, when the postbac candidates did provide opportunities for student thinking to emerge, they were more likely to pursue those ideas to understand student thinking during instruction.

Perceptions of Preparedness

The third research question examined candidates' perceptions about the effectiveness of their preparation for classroom teaching. Our analysis of the exit surveys showed significant differences in candidates' overall evaluation of their preparation and in candidates' ratings of the

TABLE 5

Comparison of Percentages of Observed Ambitious Teaching Practices

	Make Space for Student Thinking					Pursue Student Thinking		Respond to Student Thinking	
	Recognize Student Has an Idea	Associate Ideas With Particular Students	Give Students Time to Think	Rephrase Student Idea for Discussion	Elicit Ideas From Multiple Students	Probe Student Thinking	Ask Students to Explain Reasoning	Attend to Student Confusion and Pose an Alternative Idea	Adapt the Lesson for Whole Class Based on Individual Student Idea
Undergraduate	.06	.06	.06	.02	.14	.12	.04	.10	.00
Postbaccalaureate	.12	.05	.03	.04	.14	.24	.16	.15	.00
Difference	.06	.01	.03	.02	0	.12	.12*	.05	0

Note. The average number of 2 min segments for the undergraduate cohorts was 10.6 and the average number for the postbaccalaureate cohorts was 10. Percentages were calculated by the number of 2 min intervals where the practice was observed divided by total 2 min intervals in the submitted video.

$^{*}p < .05$.

TABLE 6
Exit Survey Results for Professional Environment for Undergraduate and Postbaccalaureate Candidates

	Undergraduate[a]		Postbaccalaureate[b]		
Variable	M	SD	M	SD	*p*
Coordinators' sense of mission & purpose	4.85	.37	4.65	.58	.07
Directors' sense of mission & purpose	4.85	.37	4.67	.62	.10
Program leaders & faculty's professionalism & service to candidates, school, & society	4.90	.31	4.55	.71	.00**
High quality of classroom discourse, contributions, & presentations by candidates	4.95	.24	4.32	.78	.00**
Sense of mutual respect & support among candidates	5.00	.00	4.60	.73	.00**
Seriousness of purpose regarding course evaluations	4.70	.66	4.06	.92	.01*
Offers candidates intellectual safety to take risks	4.80	.52	4.31	.87	.00**
Challenges candidates to do best work	4.65	.67	4.35	.98	.19
Course teaching reflects pedagogical principles espoused by program	4.85	.37	4.06	1.12	.00**
Courses present clear & consistent vision of what constitutes good teaching	4.85	.37	4.17	.93	.00**
Analyst provides information as needed regarding credential requirements	4.85	.37	4.05	.97	.00**
Assistant(s) provide help in using information system & uploading PACT	4.80	.52	4.47	.75	.03*

Note. Each survey item included a 5-point Likert scale response ranging from *strongly disagree* to *strongly agree*.
[a]$n = 20$. [b]$n = 78$.
*$p < .05$. **$p < .01$.

professional environment of their credential program. However, there were few differences on questions in the survey related to candidates' preparation for the teaching performance expectations. On the 33 items that correspond with the teaching performance expectations, the mean ratings for the undergraduate program candidates tended to be slightly higher than for the postbac candidates, but the differences were not statistically significant. However, on the one question that asked about candidates' overall evaluation of their preparation for teaching, the 4-year undergraduate candidates' mean rating was 3.74 on a 4-point scale and was significantly higher ($p < .05$) than the postbac candidates' mean rating of 3.44. On the section of the survey about the professional environment, the mean ratings for the undergraduate program candidates were higher on all items, and the difference was significantly higher on nine of the 12 items (see Table 6). Several of these questions reflect goals of the undergraduate program, including providing candidates with a supportive environment, modeling pedagogical approaches being espoused in the program, and offering a consistent and coherent vision of high-quality instruction.

These findings suggest that candidates in both programs held similar perceptions about their preparedness to teach according to the teaching performance expectations. However, candidates in the undergraduate program felt better prepared in terms of their overall evaluation of the program and had higher ratings of the professional environment of their program.

DISCUSSION

Given the programmatic features of the 4-year undergraduate program, we expected to find differences between the two groups of candidates in the three focal areas in this study: performance on the PACT, enactment of ambitious teaching practices, and perceptions of preparedness for full-time teaching. We anticipated that the carefully supported supervision would help the undergraduate candidates perform at more advanced levels on the teaching elements that are measured in the PACT assessment. We also expected that the extensive field placements and the structured mentorship by exemplary teachers would provide them with opportunities to observe and implement student-centered teaching practices. Finally, we thought they would perceive being better prepared for the demands of the profession because of the extensive support provided through the 4-year program design.

In contrast to our expectations, we did not find key differences in all three areas. In both groups, the majority of candidates received passing scores on the performance assessment and an equivalent percentage scored in the highest and lowest ranges. In terms of ambitious teaching practices, though there was a trend for the postbac candidates to enact more student-centered practices in their lessons, few candidates appeared to be implementing ambitious teaching practices related to making student thinking visible. As for perceptions of preparedness to teach, candidates in both groups felt similarly prepared in terms of teaching performance expectations. Differences between the groups emerged in the overall evaluation of their preparedness and in their perceptions about the professional environment of their credential programs, with higher ratings for the undergraduate program group than the postbac program group.

We propose three possible reasons for the lack of differences. First, although the two programs have distinct design characteristics, candidates in both programs complete their field placements in the same school districts. We speculate that contextual factors in these districts may be particularly influential and may be constraining opportunities for candidates to enact ambitious teaching practice. More specifically, the standards climate in California plays a particularly strong role in determining what teachers will teach and how they will interact with students (Wilson, 2003). This issue is consistent with other research that demonstrates that teachers' district and policy climates influence the extent to which they perceive being able to enact teaching practices that are responsive to students (Spillane, 1999). Thus, although the undergraduate program design advocates for instructional approaches that reflect the goals of ambitious mathematics and science pedagogy, the candidates may be unable to put them into practice without the institutional support of the partner school districts.

Second, the enactment of the undergraduate program at this particular site may differ from the UTeach model as originally conceived. The program includes features specifically designed to prepare exemplary STEM teachers, but more important than the program design is the way in which key features are implemented. Researchers who studied professional development school partnerships, for example, discovered many programs that adopted the professional development school designation but functioned primarily as clustered sites for student teacher placements, with few, if any collaborative or shared governance features (Teitel, 1997). The character and quality of program components may be more important than the particular structural model of teacher education programs (Zeichner & Schulte, 2001). We speculate that the central components of the undergraduate program have yet to become institutionalized among all parts of the teacher education system in keeping with the program design. For example, the university and school-based mentors may have different images of effective teaching and may provide conflicting feedback to candidates during the student teaching experience. Without strong coordination and coherence between the university and school sites, the teacher candidates may be challenged to implement methods advocated in the teacher education program in their own practice (Valencia et al., 2009). An important area of future inquiry concerns how the university and school-based participants develop a shared vision of ambitious pedagogy and create coherence between the experiences in these two distinct settings.

Third, establishing teacher education programs based on partnerships is a complex process that takes time. Creating school–university partnerships is complicated because it involves combining institutions with distinctive and possibly conflicting missions, organizational structures, and cultures (Sandholtz, 1997). These types of teacher education programs need time to develop and mature. Moreover, change in partnership programs tends to be incremental (Sandholtz, 1999). After 2 years of implementation, it may be premature to compare candidate outcomes from a partnership program to those from an established program. Our findings may be different if we examined the program's impact over an extended period. The differences in candidates' perceptions of the professional environment suggest initial programmatic differences in areas such as mutual respect and support, intellectual safety to take risks, and a clear and consistent vision of effective teaching. As the partnerships become more established, these types of programmatic characteristics may lead to differences not only in perceptions but also in teaching practices.

CONCLUSION

Although the candidates do not yet exhibit ambitious teaching practices, we propose that candidates in both programs are making progress. When we examine their overall performance on the PACT, we find that candidates in both groups are developing the knowledge, skills, and disposition to teach in ways that are valued by their disciplinary focus. However, when we take a closer look at their specific teaching practices in the context of classroom interactions, we find that more work is to be done. The video segments suggest that the candidates have not yet established rich discourse communities where the students and teachers question ideas, explain their thinking, and take responsibility for one another's learning (Hufferd-Ackles, Fuson & Sherin, 2004). Learning to orchestrate these types of discussions can be challenging for novice teachers (Kazemi & Stipek, 2001). However, with structured guidance of particular practices grounded in the actual work of teaching, preservice teachers can adopt such approaches to teaching (Boyd et al., 2009). Thus, an important area of future inquiry concerns how the preparation programs intend to achieve this goal and how revisions in the candidates' experiences can better equip them to enact ambitious teaching practices early in their careers. Future research that follows candidates into their first years of teaching may also examine how their perceptions about the professional environment of the credential programs and the structure of support subsequently influence their experiences in their induction years.

We propose that the analysis we have undertaken is a useful first step for studying how teacher education programs influence future teachers. Teacher education programs continue to be criticized for not preparing preservice teachers. Few studies take both a broad and up-close look to assess the extent to which preservice teachers are well prepared for the profession. Our analysis suggests that multiple sources of evidence reveal different information about prospective teachers' preparation. Our analysis of the PACT scores offers a broad perspective about what the candidates in these programs know and are able to do and suggests that the majority of candidates in both programs meet initial requirements to become full-time teachers. By attending to other sources of evidence, in this case the videos of teaching and surveys, we begin to identify aspects of practice where future teachers need additional support and target aspects of the teacher education system to refine and to further cultivate. Such a systematic approach is being advocated for the improvement of teaching (Hiebert, Gallimore, & Stigler, 2002) and is a model that teacher education programs might adopt to learn in and from their practice to improve teacher preparation.

AUTHOR BIOS

Elizabeth A. van Es, Ph.D., is an Associate Professor in the Department of Education at the University of California, Irvine. Her research interests include Teacher Cognition; Pre-service Teacher Education; In-service Teacher Professional Development; Teacher Learning Communities; Uses of Video in Teacher Learning.

Judith Haymore Sandholtz, Ph.D., is a Professor in the School of Education at the University of California, Irvine. Her research interests focus on teacher professional development, teacher education, and school-university partnerships.

Lauren M. Shea, Ph.D., is the Director of the California Science Project at the University of California, Irvine. Her research interests include professional development in the integration of language and content, language acquisition strategies, and how technology can increase teacher and student outcomes in PD programs.

REFERENCES

American Association for the Advancement of Science. (2009). *Vision and change*. Washington, DC: Author.

American Association of Colleges for Teacher Education. (2010). *Reforming teacher preparation: The critical clinical component*. Washington, DC: Author.

Ball, D. L., & Forzani, F. M. (2009). The work of teaching and the challenge for teacher education. *Journal of Teacher Education, 60*, 497–511.

Boaler, J., & Humphreys, C. (2005). *Connecting mathematical ideas: Middle school video cases to support teaching and learning*. Portsmouth, NH: Heinemann.

Borko, H., Jacobs, J., Eiteljorg, E., & Pittman, M. E. (2008). Video as a tool for fostering productive discussions in mathematics professional development. *Teaching and Teacher Education, 24*, 417–436.

Boyd, D. J., Grossman, P. L., Lankford, H., Loeb, S., & Wyckoff, J. (2009). Teacher preparation and student achievement. *Educational Evaluation and Policy Analysis, 31*, 416–440.

Darling-Hammond, L. (2006). Constructing 21st-century teacher education. *Journal of Teacher Education, 57*, 300–314.

Darling-Hammond, L. (2010). Teacher education and the American future. *Journal of Teacher Education, 61*, 35–47.

Duschl, R. (2008). Science education in three-part harmony: Balancing conceptual, epistemic, and social learning goals. *Review of Research in Education, 32*, 268–291.

Franke, M. L, Carpenter, T. P., Levi, L., & Fennema, E. (2001). Capturing teachers' generative change: A follow-up study of professional development in mathematics. *American Educational Research Journal, 38*, 653–689.

Franke, M. L., & Chan, A. (2007, April). Learning about and from focusing on routines of practice. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

Grossman, P., & McDonald, M. (2008). Back to the future: Directions for research in teaching and teacher education. *American Educational Research Journal*, *45*, 184–205.

Hiebert, J., Gallimore, R., & Stigler, J. (2002). A knowledge base for the teaching profession: What should it look like and how can we get one. *Educational Researcher*, *31*(5), 3–15.

Hiebert, J., & Grouws, D. A. (2007). The effects of classroom mathematics teaching on students' learning. In F. K. Lester, Jr. (Ed.), *Second handbook of research on mathematics teaching and learning* (pp. 371–404). Charlotte, NC: Information Age.

Hiebert, J., Morris, A. K., Berk, D., & Jansen, A. (2007). Preparing teachers to learn from teaching. *Journal of Teacher Education*, *58*, 47–61.

Hufferd-Ackles, K., Fuson, K. C. & Sherin, M. G. (2004). Describing levels and components of math-talk learning community. *Journal of Research in Mathematics Education*, *35*, 81–116.

Jacobs, V., Lamb, L., & Philipp, R. (2010). Professional noticing of children's mathematical thinking. *Journal for Research in Mathematics Education*, *41*, 169–202.

Kazemi, E., & Stipek, D. (2001). Promoting conceptual thinking in four upper-elementary mathematics classrooms. *Elementary School Journal*, *102*, 59–80.

Lampert, M. (2010). Learning teaching in, from, and for practice: What do we mean? *Journal of Teacher Education*, *61*, 21–34.

Lampert, M., Beasley, H., Ghousseini, H., Kazemi, E., & Franke, M. (2010). Using designed instructional activities to enable novices to manage ambitious mathematics teaching. In M. K. Stein & L. Kucan (Eds.), *Instructional explanations in the disciplines* (pp. 129–141). New York, NY: Springer.

Levin, D., Hammer, D., & Coffey, J. (2009). Novice teachers' attention to student thinking. *Journal of Teacher Education*, *60*, 142–154.

Lienhardt, G., & Steele, M. D. (2005). Seeing the complexity of standing to the side: Instructional dialogues. *Cognition & Instruction*, *23*, 87–163.

National Research Council. (2001). *Adding it up: Helping children learn mathematics*. Washington, DC: National Academy Press.

National Research Council. (2007). *Taking science to school: Learning and teaching science in grades K–8*. Washington, DC: National Academy Press.

National Research Council. (2012). *A framework for K–12 science education: Practices, crosscutting concepts, and core ideas*. Washington, DC: National Academy Press.

Pecheone, R. L., & Chung, R. R. (2006). Evidence in teacher education: The performance assessment of California teachers. *Journal of Teacher Education*, *57*, 22–36.

Ryu, S., & Sandoval, W. A. (2012). Improvements to elementary children's epistemic understanding from sustained argumentation. *Science Education*, *96*, 488–526.

Sandholtz, J. H. (1997). A model not a mold: A comparison of four school/university partnerships. In D. Byrd & D. J. McIntyre (Eds.), *Research on the education of our nation's teachers: Teacher education yearbook V* (pp. 258–276). Newbury Park, CA: Corwin Press.

Sandholtz, J. H. (1999). Internal change—The challenge in school–university partnerships. In C. Major & R. Pines (Eds.), *Teaching to teach. New partnerships in teacher education* (pp. 127–142). Washington, DC: National Education Association.

Santagata, R., & van Es, E. A. (2010). Disciplined analysis of mathematics teaching as a routine of practice. In J. Luebeck & J. W. Lott (Eds.), *Mathematics teaching: Putting research into practice at all levels* (Vol. 7, pp. 109–123). San Diego, CA: Association of Mathematics Teacher Educators.

Saunders, W., Goldenberg, C., & Gallimore, R. (2009) Increasing achievement by focusing grade level teams on improving classroom learning: A prospective, quasi-experimental study of Title 1 schools. *American Educational Research Journal*, *46*, 1006–1033.

Smith, M. S., & Stein, M. K. (2011). *Five practices for orchestrating productive mathematics Discussions*. Reston, VA: National Council of Teachers of Mathematics.

Spillane, J. P. (1999). External reform initiatives and teachers' efforts to reconstruct their practice: The mediating role of teachers' zones of enactment. *Journal of Curriculum Studies*, *31*, 143–175.

Stein, M. K., Engle, R. A., Smith, M. S., & Hughes, E. K. (2008). Orchestrating productive mathematical discussions: Helping teachers move beyond show and tell. *Mathematical Thinking and Learning*, *10*, 313–340.

Teitel, L. (1997). Professional development schools and the transformation of teacher leadership. *Teacher Education Quarterly*, *24*, 9–22.

Thompson, J., Windschitl, M., & Braaten M. (2013). Developing a theory of early-career teacher practice. *American Educational Research Journal*, *50*, 574–615.

The UTeach Institute. (2013). *UTeach operations manual*. Retrieved from http://www.uteach-institute.org/files/uploads/uteach-operations-ch05-instructional-program.pdf

Valencia, S., Martin, S. D., Place, N., & Grossman, P. (2009). Opportunities lost and found: The student teaching experience. *Journal of Teacher Education*, *60*, 304–322.

van Es, E. A., & Sherin, M. G. (2010). The influence of video clubs on teachers' thinking and practice. *Journal of Mathematics Teacher Education*, *13*, 155–176.

Wilson, S. (2003). *California dreaming: Reforming mathematics education*. New Haven, CT: Yale University Press.

Windschitl, M., Thompson, J., & Braaten, M. (2008). Beyond the scientific method: Model-based inquiry as a new paradigm of preference for school science investigations. *Science Education*, *92*, 941–967.

Windschitl, M., Thompson, J., & Braaten, M. (2011). Ambitious pedagogy by novice teachers? Who benefits from tool-supported collaborative inquiry into practice and why. *Teachers College Record*, *113*, 1311–1360.

Zeichner, K. M. & Schulte, A. K. (2001). What we know and don't know from peer-reviewed research about alternative teacher certification programs. *Journal of Teacher Education*, *52*, 266–282.

PEABODY JOURNAL OF EDUCATION, 89: 500–515, 2014
Copyright © Taylor & Francis Group, LLC
ISSN: 0161-956X print / 1532-7930 online
DOI: 10.1080/0161956X.2014.938997

Routledge
Taylor & Francis Group

Practice Makes Practice: Learning to Teach in Teacher Education

Morva McDonald, Elham Kazemi, Megan Kelley-Petersen, Karen Mikolasy, Jessica Thompson, Sheila W. Valencia, and Mark Windschitl
University of Washington College of Education

In this article, we argue that teaching is and should be a central element to learning to teach, particularly as teacher education once again turns toward practice. From this perspective, we must elaborate how such a shift addresses the need to bridge the gap between knowledge for teaching and knowledge from teaching, between theory and practice, and among university courses and fieldwork. If the intent of such a shift is to fundamentally change the preparation of teachers, we argue that it requires teacher education programs to do more than increase the amount of time candidates spend in clinical field placements. It requires, we argue, that teacher educators engage in simultaneous innovation in three related, but distinct aspects of program design and implementation: organizational structures and policies, content and curriculum, and teacher education pedagogy. Without such dynamic engagement, the practice-turn will go the way of many past reforms in teacher education—it will be symbolic but not significant or meaningful.

In 1991, Deborah Britzman argued in her book entitled *Practice Makes Practice: A Critical Study of Learning to Teach*, that,

> What used to be called ‘practice teaching’ and now goes under various names such as ‘student teaching,’ ‘teaching apprenticeship,’ and ‘classroom practicum’ can become thought of differently, not quite as rehearsal for the real thing, but as the state where aspects of the teacher's work, world, paradoxes, and dilemmas become a resource. (p. 14)

In this article, we extend Britzman's argument to view teaching not only as a resource for learning to teach but as a central element of learning to teach. As teacher education once again turns toward practice—meaning that learning through teaching is again more central to the preparation of teachers—we must elaborate how such a shift addresses the need to bridge the gap between knowledge for teaching and knowledge from teaching, between theory and practice, and among university courses and field work (Ball & Forzani, 2009, Grossman, Hammerness, & McDonald, 2009; Zeichner, 2012). If the intent of such a shift is to fundamentally change the preparation of teachers, we argue that it requires teacher education programs to do more than increase the amount of time candidates spend in clinical field placements. It requires, we argue, that teacher educators engage in simultaneous innovation in three related, but distinct, aspects of program

---

Correspondence should be sent to Morva McDonald, University of Washington College of Education, Seattle, WA. E-mail: Morva@uw.edu

design and implementation: organizational structures and policies, content and curriculum, and teacher education pedagogy. Without such dynamic engagement, the practice-turn will go the way of many past reforms in teacher education—it will be symbolic but not significant or meaningful (McDonald & Zeichner, 2009).

Typically, teacher education programs have responded to calls for reform and redesign through efforts to develop greater structural and conceptual coherence (Feiman-Nemser, 1990). For example, in the 1980s and early 1990s in an effort to address the persistent fragmentation between teacher candidates' learning at the university and their learning in student teaching, many programs developed professional development schools. Although an attempt at restructuring teacher education, in most cases, professional development schools did not markedly impact "the what"—the content and curriculum—or "the how"—the pedagogy of teacher education, and thus often fell short of fundamentally reforming learning opportunities for teacher candidates or the relationship between universities and K-12 public schools (Bullough et al., 1999; Zeichner, 2007). In addition to such structural responses, teacher education programs have also focused reform efforts on developing greater conceptual coherence by organizing the curriculum around a specific vision of teaching. Again the intent is to lessen the fragmentation in learning teacher candidates often experience by implementing a cohesive curriculum across courses and clinical experiences. Such efforts have led programs to develop a shared conception of teaching—such as one focused on social justice or one focused on reflective practice—that undergirds and pervades the program. Often such efforts give a name to existing practices rather than challenge programs to fundamentally reform (McDonald & Zeichner, 2009) and often leave the question of how to prepare candidates unanswered. In our view, such efforts fall short of developing conceptual coherence as we see the *how* of teacher education inextricably linked to the *what* of teacher education.

As teacher educators at the University of Washington, we too have been striving to develop structural and conceptual coherence in our programs, but as we attempt to put teaching at the center of learning to teach, we find we are required to focus on the pedagogy of teacher education while simultaneously innovating structural and curricular components (McDonald, Kazemi, & Kavanagh, 2013). In the following pages, we highlight two specific innovations within content methods courses in our Masters in Teaching programs in elementary and secondary education.[1] First, we highlight work in elementary mathematics and secondary science in which we identify core practices for teaching and use those specific practices to guide what teacher candidates will learn in each content area. Second, we describe what we refer to as *mediated field placements*—placements in which university faculty and K-12 teachers work closely with teacher candidates and K-12 students to support candidates' learning of specific practices. We describe herein our mediated fieldwork in elementary literacy and secondary English language arts. To design and implement these innovations, faculty have needed to reconsider the structure and curriculum of teacher education as well as their pedagogy. In this article, we've focused primarily on implications for pedagogy.

---

[1] The MIT elementary and secondary programs combined prepare approximately 120 candidates through a five-quarter sequence in which candidates spend a substantial amount of time as interns in K-12 classrooms. In addition to these two programs, the University of Washington also offers two alternative routes into teaching: (a) the University Accelerated Certification Program in partnership with Teach for America and (b) the Seattle Teacher Residency Program in partnership with the Seattle Public School district. In all of these programs faculty are working toward shifting learning to teach closer to practice.

CORE PRACTICES IN TEACHER EDUCATION

For some scholars, the turn toward practice has led them to organize the curriculum of teacher education around identified core practices of K-12 teaching (Core Practices Consortium, 2013; McDonald, Kazemi, & Kavanagh, 2013). Through the identification of core practices, these scholars intend to address the perennial divide between what teacher candidates learn at the university and what they are able to enact in classrooms. In the following, we describe how in elementary mathematics and secondary science methods we have organized teacher candidates' preparation around core practices and highlight the pedagogical implications of this decision.

Elementary Mathematics

Our work in elementary mathematics has been motivated by our commitments to develop teachers who can elicit and respond to children's mathematical thinking in ways that help children learn disciplinary practices of mathematics, develop fluency in core ideas of the discipline and positive identities as learners, and disrupt prevalent views of which students can succeed in mathematics (Lampert et al., 2013). Our elementary mathematics courses were organized around learning about children's thinking, developing more content knowledge for teaching, and engaging in the equity issues that pervade who succeeds in school and what counts as learning and doing mathematics. Yet we were left with a nagging dissatisfaction that we were leaving the burden of integrating ideas about children's thinking, mathematics, and equity into practice on the shoulders of novice teachers. Our engagement with core practices in elementary mathematics is situated within a pedagogical system and is motivated by a particular vision and a set of principles about teaching, learning, and learning to teach. It is a system that is not fixed but assumes that teacher educators and novice teachers will continually learn and support the ongoing development of the system.

We have used the term "ambitious mathematics teaching" as a shorthand to convey our commitments to mathematical meaning making, identity building, and equitable opportunities to learn for both teachers and students. As teacher educators, we want to work in collaboration with other teacher educators, with practicing teachers, and with novice teachers to inquire into children's thinking; experiment with and create robust opportunities for all children to learn; support meaningful participation and productive identities as mathematics learners; and disrupt longstanding assumptions about who can and cannot do math.

Our work to develop "a pedagogy of practice" attends to novices' learning of the performance aspects of teaching, the *doing* of the work. A set of principles guides how we see children and teachers in relation to one another, to content, and to the classroom and school environments. These principles are as follows: (a) Children as sensemakers. (b) Teaching includes becoming a student of your students. Teachers must know their students as individuals and as learners. (c) Teachers must design instruction for each child to do rigorous academic work in school and to have equitable access to learning taking into account the range of social skills, community capital, and linguistic resources students bring to the classroom. (d) Ambitious instruction requires clear instructional goals. (e) Teachers must be responsive to the requirements of the school environment. At the same time, they must wrestle with why schools function as they do and how schools might need to improve as institutions in a democracy.

To support novice teacher engagement with these principles and the way they underpin ambitious instruction, we have organized our pedagogy around a small set of pedagogical tools: mainly short mathematics lessons, which we call *instructional activities* (IAs), designed to give novices bounded and scaffolded engagement with the practices, principles, and knowledge of ambitious teaching. The IAs offer a structure for meaningful mathematical interactions between novice teachers and children while limiting the territory in which novices need to make judgments. They are designed to open up classroom discourse in ways that allow novices to learn to build instruction on what children *can do*.

We chose a particular set of instructional activities because we thought they would be productive starting places for novices to work on practices that research has shown are interwoven throughout ambitious instruction. In a given moment in teaching, any of these practices might simultaneously be in play or be contingent upon one another. Although we can name some of the practices we care about, none of these practices can be learned by rote, deconstructed for prescription, or learned in isolation. By naming them, we believe that we can learn more about them as teacher educators and help novice teachers both notice and experience their interdependence as they learn to teach. Our principles drive our engagement and experimentation with practices that novices need to learn to create intellectually substantive and equitable classroom cultures:

1. Aiming instruction toward a mathematical goal
2. Establishing and maintaining expectations
3. Positioning students competently
4. Eliciting and responding to student reasoning
5. Orienting students to one another's ideas
6. Representing mathematical ideas
7. Attending to pace and student motivation
8. Assessing students' understanding

Ambitious teaching requires novices to attend to multiple practices simultaneously and to make "how" and "when" judgments in the moment. How might I respond to this child's thinking? Will it help to represent this idea on the board now? It is our assertion that teachers' decision making is driven by a principled vision of both students and of the work of teaching; that ambitious teaching practice is underpinned by a set of ambitious principles.

Next we briefly describe two IAs with which we are working currently. Each description includes the nature of the activity and the ambitious teaching practices it is designed to open up for novices.

Counting

The teacher leads the class in counting chorally, focusing on different concepts and skills by deciding what number to start with, what to count by (e.g., by 10s, by 19s, by $\frac{3}{4}$), whether to count forward or backward and when to stop. As children engage in the count, the teacher publicly records the count on the board, having thought ahead of time how to record it, stopping at particular times to elicit children's ideas for figuring out the next number and to discuss what patterns are occurring in the count and why. This activity is not simply about rote counting. It is targeted to help children learn how to apply computational strategies, notice and use patterns to make predictions, and reason through why patterns are occurring. It offers novice teachers the opportunity for engagement with the practices of aiming instruction toward a mathematical goal, eliciting and responding to student reasoning, and representing mathematical ideas, among others.

Strategy Sharing

The teacher poses a computational problem, elicits multiple ideas for solving the problem and orchestrates a discussion for students to make sense of the strategies and relations between them. Careful use of representations and targeted questioning of students is designed to help the class learn the general logic underlying the strategies, identify mathematical connections, and evaluate strategies in terms of efficiency and generalizability. This activity is also oriented around student sensemaking of mathematical ideas. Novice teachers and teacher educators can work on the practices of eliciting and responding to student thinking, representing mathematical ideas, and orienting students to one another's ideas among others.

To make visible how practices, principles, and knowledge are embedded in each IA, we provide and elaborate with prospective teachers a shared frame or protocol that offers a basic skeletal plan for leading an IA. The protocol is not a script to follow or a set of rules that circumscribe the work. It functions as a planning device and guides novices' progression through routine phases of the activity. It offers a tool for building "participation structures" that will enable prospective teachers to learn to elicit and respond to student thinking and to engage every student in an elementary classroom in studying important mathematics. By holding some of the structural elements of the IA constant, the protocol allows novices and teacher educators to work together in common ways on common activities. But every enactment built on the protocol will look different in substantive ways given the particularity of any mathematical goal, group of children, teacher and context—including variations in clinical field experiences and student teaching placements.

THE PEDAGOGICAL IMPLICATIONS OF FOCUSING ON CORE PRACTICES

The implications of focusing on core practices have been a dramatic reorganization of our methods courses in almost every way, from readings to activities to assessments. The burden on the teacher educator to be able to select and use instructional activities to teach judgment, content, and stance in a way that novices can make sense of and use is immense. We are not trying to give novices a set of activities to do with children as one often hears described in "make and take" workshops for teachers. We are trying to teach novices a way of approaching the work of teaching, of peer collaboration, and of disciplinary learning in school. Therefore, the selection of core practices and instructional activities must be set within a learning cycle enabling novices and teacher educators to both learn in, from, and through practice. The learning cycle that organizes our methods course puts novice teachers and teacher educators through decomposing and understanding instructional activity, rehearsing it with guided feedback, enacting and analyzing enactments with guided feedback. This process enables the system to continue to improve.

A second implication of focusing on core practices has been the ability to forge a network of teacher educators who are talking about the development of novice teachers and teacher educator skill simultaneously, who are concerned with developing common language and engaging in improving a system for teacher preparation.

Secondary Science

The core practices in our secondary science preparation program present a contrast with those of elementary mathematics. Because the subject matter for middle school and high school science is so diverse, we (Windschitl, Thompson, Braaten, & Stroupe, 2012) needed to identify core practices that could be used to teach a range of conceptual ideas in biology, chemistry, earth science and physics. Not only that, we had to select practices that would involve K-12 learners in the language and activities of the discipline of science. Given these constraints, we used the literature on student learning and instruction to develop four "sets" of core practices. These were (a) anchoring instruction around big ideas in science, (b) eliciting students' ideas to guide instruction, (c) supporting sense-making during activity, and (d) pressing students for evidence-based explanations. These practice sets are different from those in mathematics in that they are intended to "fit together" as a unit of instruction unfolds and to be generalizable enough to use in any science unit. The first of the four is a planning practice the teacher engages in before a unit of instruction begins; the other three are enactment practices arranged strategically throughout the unit. We describe the practice sets next.

Anchoring Instruction Around Big Ideas in Science

Novices typically use curriculum topics and materials uncritically to shape goals for instruction (Davis, Petish, & Smithey, 2006). The planning practice we designed was intended to help participants develop an explicit and elaborate understanding of the target ideas they were to teach, and to do so in terms of explaining a natural phenomenon to which students could relate. This could range from earthquakes to patterns of heredity, but the event must be conceptually accessible to all students and related to lived experiences or students' interests (e.g., "Why do pulleys help us lift heavy loads? Why is asthma so prevalent in poor urban communities?"). We developed a tool to support this practice that scaffolded the kinds of thinking experienced teachers engage in when trying to locate and repackage fundamental ideas of importance within common curriculum topics. The tool prompted participants to "unpack" ideas whose importance is often assumed to be self-evident.

Eliciting Students' Ideas to Guide Instruction

This is a set of practices that initiates all units of instruction. The immediate goal is to elicit students' understandings of a phenomenon (e.g., a bicycle rusting in the backyard) that is related to an important scientific idea (in this case chemical change or conservation of mass) and then to analyze students' ways of talking about it in order to adapt upcoming instruction. Among the components of this practice are: planning beforehand a rich task that can reveal a broad range of student thinking on the target big idea; eliciting observations from students about a phenomenon of interest to them and encouraging students to offer initial causal hypotheses about the phenomenon; assisting students in synthesizing what they think they know and what they want/need to know; and after class, analyzing students' contributions to shape further instruction.

Supporting Sense Making During Activity

Working on students' ideas within an inquiry framework means helping them reconcile their initial understandings with new ideas and experiences. This second practice set combines laboratory work and readings with students' initial theories to build content knowledge and advance students' understanding of a natural phenomenon. Over a period of days, several of these sense-making conversations occur, during which the teacher revisits with students their scientific theories and questions. The teacher takes stock of students' new ideas and uses this information to design further lessons.

Pressing Students for Evidence-Based Explanations

This set of practices occurs near the end of a unit of instruction. It differs from other common science teaching episodes in that it requires students to tie together ideas from *several* investigations, readings, and so on. The goal of the discourse is to assist students in coconstructing evidence-based explanatory models for the natural phenomena that have been the focus of the unit. The practice set follows this general pattern: reorienting students to the possible explanatory models and hypotheses that could have been proposed up to this point, coordinating students' tentative explanations with available evidence, prompting students to talk about the strength of the evidence and the reasoning that links evidence with explanations, writing a final explanation, and having students apply the new explanatory model in contexts beyond those previously discussed.

THE PEDAGOGICAL IMPLICATIONS OF FOCUSING ON CORE PRACTICES

There are pedagogical implications for doing this work, some positive and others worrisome. First on the productive side, because we focus on four practice sets, we are able to produce two kinds of tools for our novices. One type of tool ("priming" tools) helps them anticipate classroom patterns of discourse and plan for a purposeful sequence of interactions with learners. Another type of tool ("face-to-face" tools that are placed on the walls of the classroom) have been codesigned by us with our novices as supports for K-12 students to engage in the types of intellectual work demanded by our core practice sets. We cannot overstate the positive influence of these tools in the emerging practice of our novices. Some of these tools are linguistic supports for young learners to engage in argumentation from evidence. Other tools such as "Summary Tables" help students (and the novice teacher) publicly organize the science ideas and activities they have engaged in over the past several days in order to continually revise explanations for complex phenomena.

A second implication emerges from the fact that our core practices do not conform with "standard" forms of traditional science teaching—that is, recitation, reproducing textbook explanations, limited discourse by students. When our novices attempt these core practices in the field, they often meet resistance from their cooperating teachers. They can receive a number of institutional signals to cover curriculum and to "keep up" with other teachers in their departments. These tensions are consequential for interns' opportunities to learn from their clinical field experiences in part because many cooperating teachers perceive that the requirement for enacting particular practices usurps their authority to mentor. Even when our cooperating teachers are amenable to the enactment of these core practices, they become unsure about how to give feedback as interns engage students in new kinds of talk, and they often fall back to mentoring only about the organization of the lesson and the pacing of the activity.

Mediated Field Placements

Faculty in both the secondary and elementary teacher education programs have moved some or all of their content area methods courses into partner schools. The aim is to provide teacher candidates with guided opportunities to observe, practice, and receive feedback on practices associated with ambitious teaching. Similar to the decision of faculty to focus on a set of identified core practices, the mediated field placements is an attempt to put teaching at the center of learning to teach and to address the problem of enactment (Zeichner & McDonald, 2011). Next we highlight the efforts of faculty who have implemented this approach in a secondary English language arts and an elementary literacy methods course.

English Language Arts

Through the experiences of holding a graduate-level teacher education course in the context of a middle school classroom, it is clear that the most relevant and meaningful opportunities to learn to teach are connected with teaching itself. The mediated field experience for secondary Language Arts Methods teacher candidates at the University of Washington immerses them in middle school classrooms working side by side with students to practice the teaching practices they learn in their methods course. Opportunities are created for teacher candidates to learn best practices through modeling by master teachers as well as working with students to understand how they learn.

Methods students (teacher candidates) currently participate in a large, highly diverse urban middle school, with 80% of its students qualifying for free or reduced lunch. The structure of the course has evolved over 5 years, and revisions are continuously made to both the content and the syllabus. We began in Year 1 with four visits to a local high school and now hold the entire course in the middle school where we spend half our time discussing research and theory in the teaching of Language Arts and the rest of our time with students. The challenges faced in organizing this type of instruction in teacher education are far outweighed by the opportunities to learn. Tools, pedagogy, and affordances are all an integral part of this work; together they create a whole course focused on addressing the needs of the students in this middle school. Each of these areas is described next.

Tools

Without conceptual tools to focus teacher candidates' engagement with classroom practice on content-rich instructional methods, they will focus only on classroom management. Over time we have developed the routines and tools that we now use each quarter. Routines are both relational and procedural and include welcoming students at the door, posting an agenda and learning target each day, and discussing the meaning of the learning targets with students. Asking teacher candidates to rephrase learning targets and complete exit slips to gauge their understanding are ways of modeling this routine.

Mentor texts are used to ground all of our work so that teacher candidates are immersed in the practice. *Absolute Diary of a Part-time Indian* and *To Kill a Mockingbird* are two of our mentor texts. We use mentor texts to connect what we are learning with each chapter of a text. When we read aloud *A Midsummer Night's Dream* by William Shakespeare, we model language use and continue our questioning strategies so that our teacher candidates can learn with actual practice. By using these tools and routines, we are more able to draw teacher candidate attention to the aspects of teaching that we want them to learn in, through, and for practice.

Pairs of teacher candidates are videotaped teaching a section of a novel to the class in which they created their own norms and procedures around discussion of this novel. When the discussions are completed, there is time to debrief the process and the content. Teacher candidates then view their video and based on their performance and the feedback received, each teacher candidate writes a two-page reflection, describing how the practice is enacted, pressing for understanding and reflections on what could be done differently.

Pedagogy

To explore the practice of teaching, reading and writing strategies are modeled in class. In doing so, teacher candidates are introduced to ways of asking deeper and more discussion-oriented questions. This is also an opportunity to model how to engage students in authentic thinking around social justice issues. Without developing some alternative pedagogical approaches to this work, the affordances of the authentic setting could not be fully utilized. Some of the most useful approaches are rehearsals, which are actual practices of what teacher candidates will be teaching the next class period.

Teacher candidates learn to clearly define learning targets that are student centered by not only developing them for each class but also having them clearly defined for their own learning. Because the teacher candidates experience this firsthand, they develop an understanding of how this reinforces learning for children. When the student can articulate how the learning target impacts him or her, and how he or she can display mastery of the learning target, there is more ownership of how the student understands his or her progress and can improve.

Each cycle of teaching begins with a learning target, and we discuss how this learning target impacts each teacher candidate. We discuss readings for the week, and I model a reading or writing strategy grounded in course readings for the week. After deconstructing the strategy teacher candidates rehearse the strategy. By concentrating on specific reading and writing strategies, we have the opportunity to focus on questioning strategies as implemented in whole-class, small-group, and one-on-one discussions.

Affordances

Affordances give teacher candidates avenues for trying strategies learned in the context of working with students. This type of practice-based teacher education gives opportunities to work with individual and small groups of middle school students and to see, in the moment, how students respond and engage. Teacher candidates are also able to explore ways to plan what they must do next in working with students. By learning with and from our middle school students, the teacher candidates are able to see growth in their students and themselves.

Our partner school identified the need for students to receive one-on-one help with reading and writing. The teacher educator or the school-based practitioner (school-based teacher) models particular strategies that will be taught in the middle school classroom and then teacher candidates practice in order to prepare for working in such classrooms. Each teacher candidate has one or two students to work with, and the conversation begins with asking the seventh grader about his or her day and about the current writing assignment. The conversations are centered on a student's writing and explaining how he or she arrived at this part of the paper. The uptake from students directs the teacher candidate to his or her next question.

After working with students, teacher candidates debrief what they saw, heard, and read and, by using readings, ask questions about the student writing. At this point, the seventh-grade teacher comes into class and listens as the teacher candidate asks questions and ponders the work they just completed. One question that prompted conversation was, "How do I keep my 7th grader on task? She wants to tell me all parts of her life, and I don't know how to manage this and keep her on task." Based on this, the teacher talks to teacher candidates elaborating on strategies to keep seventh graders on task.

At this point, we open the discussion to problems of practice that teacher candidates have observed in the middle school classroom. Having a middle school teacher available during this time helps to understand why certain moves were made and why the teacher dealt with issues in particular ways.

LESSONS LEARNED

Videotaping has proven to be an invaluable tool for reinforcing teacher candidate learning. Although the logistics of it can be challenging, the benefits far outweigh whatever issues exist. Videotaping provides several purposes within a variety of contexts. First, the college instructor videotapes herself in the classroom as she is modeling a specific lesson for the teacher candidates. After the modeled lesson, the teacher candidates watch this video twice. They watch the first time seeing the entire video and then they watch again as they write down what they see, using the Language Arts lesson-plan template. The context is to unpack each teacher move and to explore why certain choices were made for this particular lesson. Second, when teacher candidates videotape themselves presenting the same lesson, the teacher candidates answer required questions as part of their reflection writing about what worked well and what they might change if they were to teach this lesson again.

Clinical experiences with students from the beginning of the program give teacher candidates a deeper level of comfort in working with and building relationships with students as the program progresses. During summer quarter, Language Arts teacher candidates take opportunities to plan lunch activities with students and work one-on-one with students with much more ease than in previous years when coursework was not embedded in classrooms.

Anecdotally, teacher candidates have gained confidence working one-on-one with students, finding ways to reach out to students, building relationships, and pushing students to think more deeply about their work with students. Teacher candidates have also demonstrated skills in getting students to talk about writing and reading in ways that we were able to practice in classrooms.

As for teacher educator learning, methods coursework where teacher candidates navigate the work of high cognitive demand and eliciting and responding to students would not be possible in a university setting. The continuous modeling, rehearsal, and practice cycle gives teacher educators opportunities to explore the uptake of teacher candidates (themselves) just as the teacher candidates explore their own uptake with the students in the middle school. This cycle is both necessary and relevant for teacher candidate growth and learning as the teacher candidates become more familiar with students. This also presents teacher educators the opportunities to look at their own teaching. Am I explicit? What more do I need to revisit to make this cycle work for each of the teacher candidates and then, their own students. It is clear in seeing both teacher candidates and seventh graders ready to learn that the pedagogy of teacher education has changed to a model where learning in and from practice strengthens the practice and improves learning for children with whom we work.

ELEMENTARY LITERACY METHODS

Although similar in intent to the English language arts methods course, the literacy methods course has implemented the mediated field placement structure differently. Our elementary literacy methods coursework runs across three of the four quarters of the program. Our approach in all of these classes is to help teacher candidates develop both conceptual understandings and practical tools for teaching reading and writing so they can successfully implement and adapt instruction. We aim to help our candidates become thoughtfully adaptive teachers through practice-based work—to support them in enacting literacy instruction that reflects deep knowledge of the discipline and of learners, and adjusting that practice to meet the ever-changing needs of real students in real classrooms (Hammerness, Darling-Hammond, & Bransford, 2005).

We focus here on the second of the three literacy courses—reading methods—because this is where we have made major shifts in how we enact practice-based teacher preparation. To put this course in context, during the first quarter literacy class, teacher candidates meet on campus for 6 of the 9 weeks, and in a bilingual K-3 public summer school for 3 weeks. Candidates study an interactive model of reading and have several opportunities to work with children, including administering and interpreting literacy assessments as well as working individually and in small groups with students to facilitate comprehension in reading aloud settings. This incoming knowledge and experience are essential as candidates enter the fully mediated, second-quarter course.

How Mediated Coursework Influences the Structure of Literacy Methods

Our mediated reading methods course meets weekly in an urban elementary school where we have developed partnerships with two classrooms teachers—one primary and one intermediate. Although we began this work focusing on one classroom rather than two, we ultimately decided that we needed to provide a primary and intermediate grade experience for our candidates so that we could address both word work and comprehension instruction across a range of student abilities (core components of our methods course). This focus also meets the needs of our teacher partners because it aligns with their instructional emphasis and their K-12 students' needs.

One university-based teacher educator and two teaching assistants (former elementary teachers) make up the instructional team responsible for a class of approximately 30 teacher candidates. In addition, we hire a half-day "roving" substitute teacher so that classroom teachers can join the instructional team for 30 to 40 min during our 5-hr class each week. A portion of that class time is spent working directly with children, both individually and in small groups (approximately 30 min with students at each grade level). However, because teacher candidates are responsible for providing core instruction directly to children (as compared with supplemental activities), approximately half of the remaining 4-hr class is spent reviewing or rehearsing lesson plans, debriefing lessons taught that day, and planning next lessons—the rest of the time is devoted to learning new content and instructional strategies. Although the physical location and work in classrooms is a necessary feature of our model, it is not sufficient to call this work "mediated."

The mediated nature of the work comes from how course instructors, classroom teachers, and teacher candidates work together to plan, implement, and evaluate reading lessons with children. Our goal is to make our thinking and our practice visible as we do the real work of teaching children with a wide range of reading abilities, strengths, and needs. Over several years, we have been able to structure this work to be mutually beneficial for the children and for our teacher candidates, and to be a mutual learning experience for the course instructors and the classroom teachers. However, this has taken time. We have worked to establish relationships and ways of communicating as well as shared understandings of high-quality reading instruction, a range of teaching strategies, and expectations for students. And, we have agreed to become coteacher educators. Without these understandings, our work would not be genuinely mediated.

We begin the school year with several mediated observations of teaching. We work with the classroom teachers to set up one to two observations of them teaching reading lessons and supporting children during independent work. Our goal here is to get a sense of the classroom routines, the children, and how reading instruction works in each class. The lessons we observe are a normal part of the teachers' curriculum—not something we have asked them to do for our purposes. However, because we have discussed the observation with the teachers, we can prepare candidates for the observation by providing background on the lesson and cueing them to observe for particular content and pedagogical strategies. After the observation, the classroom teacher debriefs the lesson with the candidates and the course instructors, establishing a model of how to talk with one another about our practice to deepen and expand it (i.e., examining the content and pedagogical choices the teacher made; using evidence of children's engagement and learning to evaluate learning and plan next lessons; supporting inquiry and reflection). This same process is repeated in the first couple of weeks as the methods instructor collaboratively plans and teaches a lesson in each of the classrooms. This time, the methods instructor models the types of lessons the teacher candidates will be doing with the children over the course of the quarter—word work and supported reading with primary children, and small-group comprehension discussions and lessons with intermediate children. Again, the debriefing includes the classroom teacher, methods instructors, and teacher candidates.

Planning for instruction is also mediated in several ways. Classroom teachers work with course instructors and candidates at the beginning of the quarter to identify reading instructional levels and specific needs of students. Sometimes this takes the form of a three-way conversation where the classroom teacher provides background on ongoing classroom reading instruction, and then we discuss what and how we will provide instruction for individual and small-group work with the children. Other times, teacher candidates are directly involved in helping teachers assess their students' reading needs and setting goals for instruction. For example, 2 months into the school year, our candidates conducted running records and early reading assessments with first-grade children to help the classroom teacher reassess the children (she had done so at the beginning of the year) and to establish small groups for instruction. After analyzing the results with the course instructors to guide them, the candidates put together a "data wall" (Dorn & Henderson, 2010) to group children with similar instructional needs. The classroom teacher, candidates, and course instructors collaboratively discussed the results, adjusting groupings with additional information, and then set a tentative course of instruction for the next 4 weeks.

Planning is also mediated as part of the weekly cycle of implementing lessons and debriefing. Teacher candidates generally work in small collaborative teams (e.g., three to five candidates) to plan and implement their lessons. They share responsibility for a small group of children, but they take turns at implementing and observing the lessons. The team collaboratively plans the lesson, including identifying instructional objectives and strategies, the sequence of activities, and selecting appropriate reading materials. Although the lessons are tailored to the specific group of children with whom they are working, candidates are expected to include specific instructional strategies that we have modeled, practiced, and debriefed during coursework in the prior weeks. For example, candidates may be using different levels of expository text with intermediate-grade students but all of them may be helping students learn to use evidence to support their claims or distinguishing important from unimportant information. Alternatively, candidates may be using a similar strategy for teaching decoding skills and a similar practice activity for children (e.g., word sorts), but they may be working with children whose needs range from single letter-sound relationships to those who are learning to read words with complex vowel patterns. This shared focus or structure for the lessons allows us to highlight specific instructional methods in coursework and to mediate and scaffold the candidates' practice before they work with children. It also allows us to provide specific feedback on the lesson plan before it is implemented the following week. Thus, peers and teacher educators who are familiar with the children, the teacher candidates, and the teaching strategies mediate the planning process, not just the plan.

During actual instruction with children, two of the candidates coteach the lesson while the other two candidates videotape and take detailed notes on both the teaching strategies and on students' responses. In addition, one of the teacher educators (i.e., methods instructor, teaching assistants, or classroom teacher) serves as observer and coach to two teaching teams, providing on-the-spot scaffolding and another vantage point for debriefing. After the lesson is taught, the team of teacher candidates and the teacher educator discuss the lesson, using a format similar to the one introduced at the beginning of the year. Our goal during this mediated conversation is to support candidates' analytic thinking about their teaching, deepen their conceptual understanding about reading instruction, build flexibility into their teaching repertoires, and use evidence from this lesson to begin planning the next lesson.

In addition to this mediated cycle of planning–teaching–analyzing–planning for reading instruction, our partnership provides teacher candidates with many other mediated experiences with children and school staff. The relationships that are developed over the 10 weeks we are in the school need to be nurtured and understood, and the value of having multiple perspectives and avenues of support cannot be overestimated. It builds a flexibility and openness to instruction that is difficult to forge when one student teacher is placed with one cooperating teacher or one methods instructor. It also builds a sense of inquiry and professional collaboration that fosters ongoing professional growth.

Implications for the Pedagogy and Curriculum of Literacy Methods

The nature of our mediated coursework both expands and restricts our pedagogical approaches and curriculum. Because our candidates teach students with a wide range of abilities, we must provide them with examples and strategies for teaching across the developmental spectrum. This involves not only identifying instructional targets and strategies but also selecting appropriate reading material to accompany every lesson. Class readings, videotapes, classroom models, and text analysis are woven into the coursework and made available online to help candidates prepare their lessons. In addition, coplanning with our partner teachers to be sure that our instruction is compatible with theirs expands both what we teach in our courses as well as who does the teaching—we appreciate and make time for our partners to share instructional ideas during our time with them.

As we noted earlier, the cycle of mediated instruction occupies more than half of our allocated class time. Further, because we focus on two main areas—word work and comprehension—other topics don't receive as much attention as they might. This is moderated somewhat because when children are engaged in reading, we need to consider how all the elements of reading interact to produce learning, and because our candidates enter this course with a good foundation of reading processes from the first-quarter class. Nevertheless, we have to limit our classroom modeling, microteaching, and attention on some strategies and topics that deserve more attention in order to spend more time preparing, practicing, and analyzing our work with children.

In conclusion, we see the turn toward practice—the emphasis on placing teaching at the center of learning to teach—as a promising shift in teacher education (Ball & Forzani, 2009; Grossman et al., 2009; Zeichner, 2012). From our own experiences as described here and as scholars of teacher education, we see one of the fundamental challenges of such a shift as requiring us to engage the structure, curriculum, and pedagogy of teacher education simultaneously. Without such attention, we assume that the turn toward practice will take the same path as past reform efforts and will soon find itself overshadowed by some newer innovation. By addressing the structure, curriculum, and pedagogy of teacher education while reorienting the work of learning toward practice, however, we expect that we and teacher educators engaged in similar approaches can better prepare teachers to do the actual work of teaching.

AUTHOR BIOS

Morva McDonald, Ph.D., is an Associate Professor in Teacher Education in the College of Education at the University of Washington. Her scholarship, teaching, and research focus on teacher education and the preparation of teachers to work in hard to staff schools.

Elham Kazemi, Ph.D., is an Associate Professor in Curriculum and Instruction at the University of Washington. Her research interests revolve around improving elementary mathematics teachers and teacher educator's classroom practices to promote student learning in high poverty settings.

Dr. Megan Kelley-Petersen is the Associate Director for the U-ACT Program in the College of Education at the University of Washington.

Karen Mikolasy is a Teaching Associate in Curriculum and Instruction in the College of Education at the University of Washington.

Jessica Thompson, Ph.D., is an Assistant Professor at the University of Washington. She is the Principal Investigator or Co-Principal Investigator on multiple grants in the area of teacher mentoring and professional development.

Sheila W. Valencia, Ph.D., is Professor of Language, Literacy, & Culture at the University of Washington. Her current research interests focus on literacy instruction in poverty-impacted schools and teacher development.

Mark Windschitl, Ph.D., is a Professor of Curriculum and Instruction at the University of Washington. His research interests focus on early career development of science teachers.

REFERENCES

Ball, D. L., & Forzani, F. (2009). The work of teaching and the challenge for teacher education. *Journal of Teacher Education*, 60, 497–511.

Britzman, D. (1991). *Practice makes practice: A critical study of learning to teach*. Albany: State University of New York Press.

Bullough, R., Burrell, J., Young, J., Clark, D., Erickson, L., & Earle, R. (1999). Paradise unrealized: Teacher education and the costs and benefits of school-university partnerships. *Journal of Teacher Education*, 50, 381–390.

Core Practices Consortium. (2013, April). *Building a shared understanding for designing and studying practice-based teacher education*. Symposium presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Davis, E. A., Petish, D., & Smithey, J. (2006). Challenges new science teachers face. *Review of Educational Research*, 76, 607–651.

Dorn, L., & Henderson, S. C. (2010). The comprehensive intervention model: A systems approach to RTI. In M. Y. Lipson & K. K. Wixson (Eds.), *Successful approaches to RTI: Collaborative practices for improving K-12 literacy* (pp. 88–120). Newark, DE: International Reading Association.

Feiman-Nemser, S. (1990). Teacher preparation: Structural and conceptual analysis. In R. Houston, M. Haberman, & J. Sikulka (Eds.), *Handbook of research on teacher education*. New York, NY: Macmillan.

Grossman, P., Hammerness, K., & McDonald, M. (2009). Redefining teaching, re-imagining teacher education. *Teachers and Teaching: Theory and Practice*, 15, 273–289.

Hammerness, K., Darling-Hammond, L., & Bransford, J. (2005). How teachers learn and develop. In L. Darling-Hammond & J. Bransford (Eds.), *Preparing teachers for a changing world* (pp. 358–389). San Francisco, CA: Jossey-Bass.

Lampert, M., Franke, M., Kazemi, E., Ghousseini, H., Turrou, A. C., Beasley, H., . . . Crowe, K. (2013). Keeping it complex: Using rehearsals to support novice teacher learning of ambitious teaching in elementary mathematics. *Journal of Teacher Education*, 64, 226–243.

McDonald, M., Kazemi, E., & Kavanagh, S. (2013). Core practices and teacher education pedagogies: A call for a common language and collective activity. *Journal of Teacher Education*, 64, 378–386.

McDonald, M., & Zeichner, K. (2009). Social justice teacher education. In W. Ayers, T. Quinn, & K. Stovall (Eds.), *Handbook of social justice in education* (pp. 595–610). New York, NY: Routledge.

Windschitl, M., Thompson, J., Braaten, M., & Stroupe, D. (2012). Proposing a core set of instructional practices and tools for teachers of science. *Science Education*, 96, 878–903.

Zeichner, K. (2007). Professional development schools in a culture of evidence and accountability. *School-University Partnerships*, 1, 9–17.

Zeichner, K. (2012). The turn once again toward practice-based teacher education. *Journal of Teacher Education*, 63, 376–382.

Zeichner, K., & McDonald, M. (2011). Practice-based teaching and community field experiences for prospective teachers. In A. Cohan & A. Honigsfeld (Eds.), *Breaking the mold of pre-service and in-service teacher education: Innovative and successful practices for the 21st century* (pp. 45–54). Lanham, MD: Rowman and Littlefield.

PEABODY JOURNAL OF EDUCATION, 89: 516–532, 2014
Copyright © Taylor & Francis Group, LLC
ISSN: 0161-956X print / 1532-7930 online
DOI: 10.1080/0161956X.2014.938998

Routledge
Taylor & Francis Group

The CAEP Standards and Research on Educator Preparation Programs: Linking Clinical Partnerships With Program Impact

Tina Heafner, Ellen McIntyre, and Melba Spooner
University of North Carolina Charlotte

Responding to the challenge of more rigorous and outcome-oriented program evaluation criteria of the Council for the Accreditation of Educator Preparation (CAEP), authors take a critical look at the intersection of two standards: Clinical Partnerships and Practice (Standard 2) and Program Impact (Standard 4). Illustrating one aspect of a secondary education teacher preparation program, authors consider how clinical partnerships can be designed in light of these standards to have a positive impact on P-12 student learning. Focusing on the program evaluation framework, authors describe a spectrum of diverse formative and summative growth measures that document the scope of impact for all stakeholders, including students. In light of the Feuer, Floden, Chudowsky, and Ahn (2013) questioning framework, authors assess program outcomes. In closing, the authors (a) conclude that comprehensive evaluation models are needed to document complex outcomes, which will make program impact more visible and measureable; (b) recommend using the Feuer et al. decision-making framework to initiate and guide programmatic design and evaluation model development; and (c) affirm CAEP's expectations—clinical partnerships go beyond positive relationships, coselection of mentor teachers and candidates, and commitment to diverse settings to ensuring P-12 student achievement—as attainable goals for educator preparation accreditation.

On August 29, 2013, the Council for the Accreditation of Educator Preparation (CAEP) adopted a new set of standards. These new standards are intended to make the accreditation process more rigorous and outcome-focused by setting minimum criteria for program admissions and requiring programs to demonstrate their graduates' impact on student achievement. Some suggest these new standards will differentiate programs like the field has never seen, with the possible result of closing some programs. Certainly there is an expectation that fewer programs will be accredited by a national organization than is the current practice. Many in the field of educator preparation welcome this change, but it will also challenge us as never before.

In this article, we highlight two of the CAEP standards, Clinical Partnerships and Practice (Standard 2) and Program Impact (Standard 4), with the goal of recommending how the two standards might intersect around particular program features that can contribute to the overall

---

Correspondence should be sent to Tina Heafner, University of North Carolina Charlotte, 9201 University City Boulevard, Charlotte, NC 28223. E-mail: Tina.Heafner@uncc.edu

Color versions of one or more of the figures in this article can be found online at www.tandfonline.com/hpje.

program evaluation. In our case, we highlight one aspect of secondary education teacher preparation programs, a requirement to participate in a tutoring program. We use this example as an illustration of how educators might evaluate two new CAEP standards: Clinical Partnerships and Practice and Program Impact. We begin by describing these two CAEP standards in brief. We use National Academy of Education's 2013 report *Evaluation of Teacher Preparation Programs: Purposes, Methods, and Policy Options* to frame the evaluation (Feuer, Floden, Chudowsky, & Ahn, 2013). We then describe the work at our university, focusing on the tutoring program, to describe how educators might approach the evaluation and research of their own programs. Finally, we recommend general evaluation methods for programs with similar goals.

THE CAEP STANDARDS ON CLINICAL PARTNERSHIPS AND PRACTICE AND PROGRAM IMPACT SUMMARIZED

The primary accrediting agency of teacher preparation programs of the last half century was the National Council for Accreditation of Teacher Education (NCATE). NCATE has always valued strong partnerships between school districts and university-based educator preparation programs. As Cibulka (2011) and Larson and Kyle (2014/this issue) suggest, clinical partnerships form the organizing structure within which all stakeholders commit to the recruitment, admission, preparation, assessment, and continuing development of teachers who effectively enable the learning of all students in all contexts. The new accrediting body, CAEP, builds on this standard and requires even stronger partnerships with explicit language that requires particular sorts of relationships that focus on student learning partnerships (see http://www.caepnet.org for a list of all standards and indicators of each). Today, it is not enough for universities to place teacher candidates in diverse schools for their student teaching or even prestudent teaching experiences. Candidates must have direct involvement in improving the achievement of students. CAEP Standard 2, Clinical Partnerships and Practice, is stated in this way:

> The provider ensures that effective partnerships and high-quality clinical practice are central to preparation so that candidates develop the knowledge, skills, and professional dispositions necessary to demonstrate positive impact on all P-12 students' learning and development.

Three indicators for this standard include specifications about (a) Partnerships for Clinical Preparation, (b) Clinical Educators, and (c) Clinical Experiences. A few key lines from each of these standard indicators that focus on student achievement follow. For "Clinical Preparation," the standards require that

- partners co-construct mutually beneficial P-12 school and community arrangements,
- partners . . . share responsibility for continuous improvement of candidate preparation, and
- partners . . . share accountability for candidate outcomes.

The "Clinical Educators" are expected to

- co-select, prepare, evaluate, support, and retain high-quality clinical educators . . . who demonstrate a positive impact on candidates' development and P-12 student learning and development.

For the "Clinical Experiences," teacher preparation programs are to partner with schools, community groups, agencies, and so on, to

- Design clinical experiences of sufficient depth, breadth, diversity, coherence, and duration to ensure that candidates demonstrate their developing effectiveness and *positive impact on all students' learning and development.*

The language of these indicators reflect the new thinking for accreditation of teacher preparation programs—that the clinical partnerships go beyond positive relationships, coselection of mentor teachers and candidates, and commitment to diverse settings—to all of these indicators and a simultaneous requirement that *positive impact on all students' learning and development* is at the forefront of the partnership. So, how will we know the clinical partnerships designed will have an impact on student learning?

Measuring Program Impact

We see the inclusion of CAEP Standard 4, Program Impact, as another way to emphasize that the new standards require attention not just to candidate satisfaction or acquisition of a particular set of teaching skills and processes but also to program impact. That is, teacher preparation programs must have a direct impact on P-12 student achievement. Standard 4, Program Impact, reads:

> The provider demonstrates the impact of its completers on P-12 student learning and development, classroom instruction, and schools, and the satisfaction of its completers with the relevance and effectiveness of their preparation.

Four indicators specify how impact can be measured. These include satisfaction of completers, satisfaction of employers, indicators of teaching effectiveness through validated observation instruments, and "Impact on P-12 Student Learning and Development." The latter indicator will be the most challenging for all programs and is the indicator we focus on in this article. It reads,

> The provider documents, using multiple measures, *that program completers contribute to an expected level of student-learning growth.* Multiple measures shall include all available growth measures [including value-added measures, student-growth percentiles, and *student learning and development* objectives] required by the state for its teachers and available to educate or preparation providers, other state-supported P-12 impact measures, and any other measures employed by the provider.

Our goal in this article is to illustrate how educators can begin to address assessment of CAEP standards on Clinical Partnerships and Practice and Program Impact. We use one aspect of one program—a tutoring intervention—as illustrative of how we tackle "impact on student learning" while meeting the CAEP goals for Clinical Partnerships. We now turn to important research literature on teacher preparation program evaluation.

Teacher Preparation Program Research and Evaluation

Evaluating the quality and effectiveness of teacher preparation programs is necessary for improving teaching and learning. But the relationship between teacher preparation and instructional quality is still not well understood; the relationship between teacher preparation and student achievement is even less well understood. Yet we hold that, at least in part, this connection between teacher preparation and student achievement can be made, which we highlight in the next section. First, however, we ground the work in the most recent, comprehensive report on teacher preparation evaluation. In *Evaluation of Teacher Preparation Programs: Purposes, Methods, and Policy Options* (Feuer et al. 2013), the authors recommend that a combination of input measures of teacher candidates and programs (e.g., GPA, college entrance exams, percentage of minority students in incoming class, number of candidates in high-need subject areas and specialties) and outputs measures (e.g., surveys of satisfaction and achievement growth of students in graduates' classrooms, or value-added scores) should be part of any program evaluation system. We address outputs in this article, especially as related to a focus on P-12 student achievement.

The Feuer et al. (2013) report strongly suggests that all programs should clearly express goals for evaluation. For instance, is it to hold the program accountable? To provide the public with information about the program? To improve the work? They suggest that unless program leaders get explicit about why they are undergoing an evaluation of any sort, there could be misuse of data and negative unintended consequences of the review. They provide a framework for making decisions about teacher preparation evaluation. This framework addresses the following questions:

Question 1: What is the primary purpose of the Teacher Preparation Program (TPP) evaluation system? Designers of the evaluation should be able to articulate the *primary* purpose, then perhaps one or more secondary purposes.

Question 2: Which aspects of teacher preparation matter most? Choices will have to be made about which aspects are of greatest interest, based on the purpose of the evaluation and the values of the organization doing the evaluating.

Question 3: What sources of evidence will provide the most accurate and useful information about the aspects of teacher preparation that are of primary interest? Designers must decide which combination of measures will yield the most useful information about program aspects of interest.

Question 4: How will the measures be analyzed and combined to make a judgment about program quality? Applying the best available methods to ensure that the resulting interpretations are valid and fair is a key requirement.

Question 5: What are the intended and potentially unintended consequences of the evaluation system for TPPs and education more broadly? Decisions will need to be made about the actions that will be taken based on evaluation results. The overall goal should be improving programs rather than punishing or embarrassing the low-performing ones.

Question 6: How will transparency be achieved? What steps will be taken to help users understand how to interpret the results and use them appropriately? All of the information about the evaluation should be easily accessible (through the Internet or other means) and communicated in a way that is understandable to users and the public.

Question 7: How will the evaluation system be monitored? Once an evaluation system is under way, the consequences of the system, both intended and unintended, should be monitored and the accuracy, reliability, and validity of the measures and methods should be studied. Designers and implementers should consider whether the system could adapt to new expectations for teachers (pp. 6–8).

We use these questions to look carefully at CAEP Standards for Clinical Partnerships and Practice and Program Impact. But first we describe the context of our program and illustrate one aspect of the program—the tutoring requirement—to illuminate evaluation processes. Of importance, there are benefits and limitations of each assessment system and assessments vary significantly depending on their intended purpose. Recognizing the strengths and drawbacks of each assessment is essential in communicating the merit and utility of the outcomes documented.

Site-Based Tutoring of Secondary Social Studies Students

Educators face a variety of challenges when planning productive, meaningful clinical experiences throughout their preparation programs. Teacher educators seek ways to transform traditional learning opportunities into purposeful and relevant experiences for candidates to observe classroom teaching and explore content area pedagogical processes in diverse settings. As researchers advocate, well-integrated clinical work taught in the context of schools needs to create field-based learning environments that challenge candidates to rethink deep-seated pedagogical and content orientations, to bridge methods course content with practice through aligned school–university partnerships, and to emphasize a more in-depth understanding of teaching and learning (Cole & Knowles, 1993; Darling-Hammond, 2010a, 2010b; Darling-Hammond, McLaughlin, & Milbrey, 1995; Hammerness, Darling-Hammond, Grossman, Rust, & Shulman, 2005).

The tutoring intervention described was designed to do all these and effectively meet the CAEP indicators of Clinical Partnerships that relate to program impact described earlier. They are as follows:

- Partners co-construct mutually beneficial P-12 school and community arrangements.
- Partners . . . share responsibility for continuous improvement of candidate preparation.
- Partners . . . share accountability for candidate outcomes.
  Co-select, prepare, evaluate, support, and retain high-quality clinical educators . . . who demonstrate a positive impact on candidates' development and P-12 student learning and development.
- Design clinical experiences of sufficient depth, breadth, diversity, coherence, and duration to ensure that candidates demonstrate their developing effectiveness and *positive impact on all students' learning and development.*

Program Structure

The tutoring program took place in the secondary teacher preparation program in our large, urban research university. The College of Education has had a long, well-established Professional Development Schools (PDS) model for clinical partnerships between the university and nearby school districts. The tutoring program was part of the social studies methods courses in the secondary education program. The methods course was taught onsite and was an outcome of a *co-constructed, co-designed* university–school partnership. The course was co-taught by both high-quality clinical educators and university faculty. The after-school social studies tutoring program emphasized literacy skills and content remediation for high school students while providing teacher education candidates scaffolded learning experiences through interaction with practicing teachers in their licensure area. The program was facilitated by university social studies methods instructors and the chair of the social studies department within the school. School specialists (i.e., English as a Second Language teacher), school administrators, and all social studies faculty were involved in methods course planning and delivery as well as tutoring implementation. On average, 55 high school students, including diverse ethnic and socioeconomic groups reflective of school demographics, voluntarily participated in weekly tutoring sessions. Participation was solicited by teachers in communication with parents and families. Tutoring and pedagogical interventions were designed to occur early in secondary students' social studies coursework with sustained support as students progressed through their studies. Participation over the course of 3 to 4 years during high school was a hallmark of the program. Our vision of the interplay among CAEP standard indicators previously mentioned for Clinical Partnerships and Indicators of Program Impact is presented in the following diagram (see Figure 1).

Program Goals

As Feuer et al. (2013) stressed in their report on evaluations of teacher preparation programs, any education evaluation must first clearly delineate the goals of the program. Our goals for this one aspect of the larger secondary preparation program were to (a) create an engaging learning experience in which candidates are given authentic opportunities to demonstrate their developing effectiveness and reflect on impact on student learning, (b) to boost academic achievement of low-achieving students, (c) to affect the learning of the clinical faculty (teachers) working in the program, and (d) to affect the learning and effectiveness of the university teacher educators in the program.

Evidence of Program Impact

Before we describe the results of the tutoring model to our goals, it is important to stress that in addition to ways we assess program impact within specific components of programs, we also look to the value-added studies conducted in our state on each of our teacher preparation programs. For the past 5 years, Henry and his colleagues (e.g., Henry, Bastian, & Fortner, 2011; Henry et al., 2014) have conducted analyses of all teacher preparation programs in our state by linking them to student achievement growth scores. These value-added studies have compared teachers in public preparation institutions to private, teachers prepared by state university educator preparation programs against alternative programs, teachers with graduate degrees against teachers without them, and graduates of specific state university programs to graduate of other programs in the state, all by linking the teachers' student achievement scores with their preparation programs and many controlling variables. We value these studies and use them to guide our work. However, they raise as many questions as they answer. Thus, we look to more immediate, local data visible within the programs. Hence, for the tutoring model, we had multiple assessments. Based on a

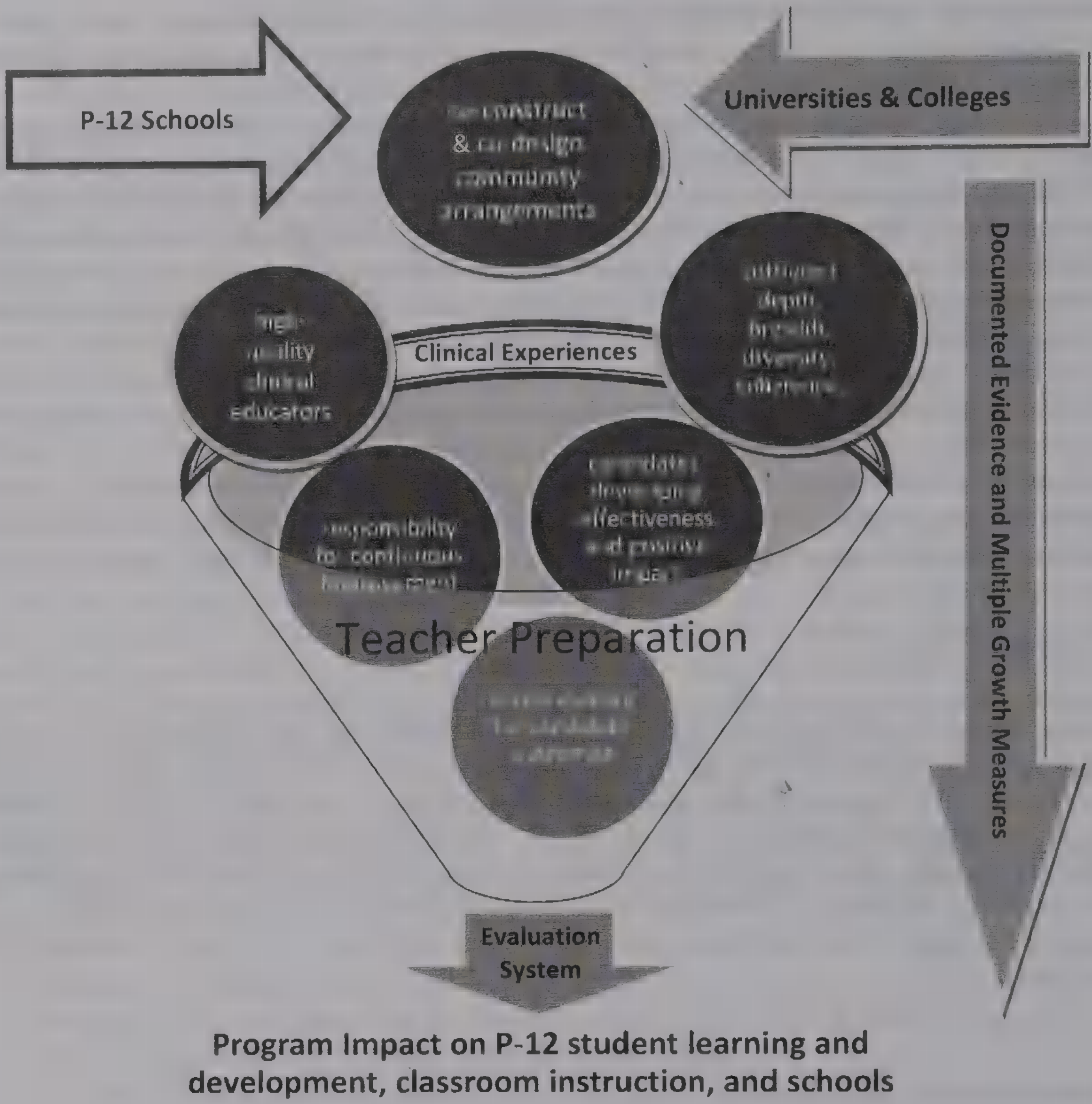
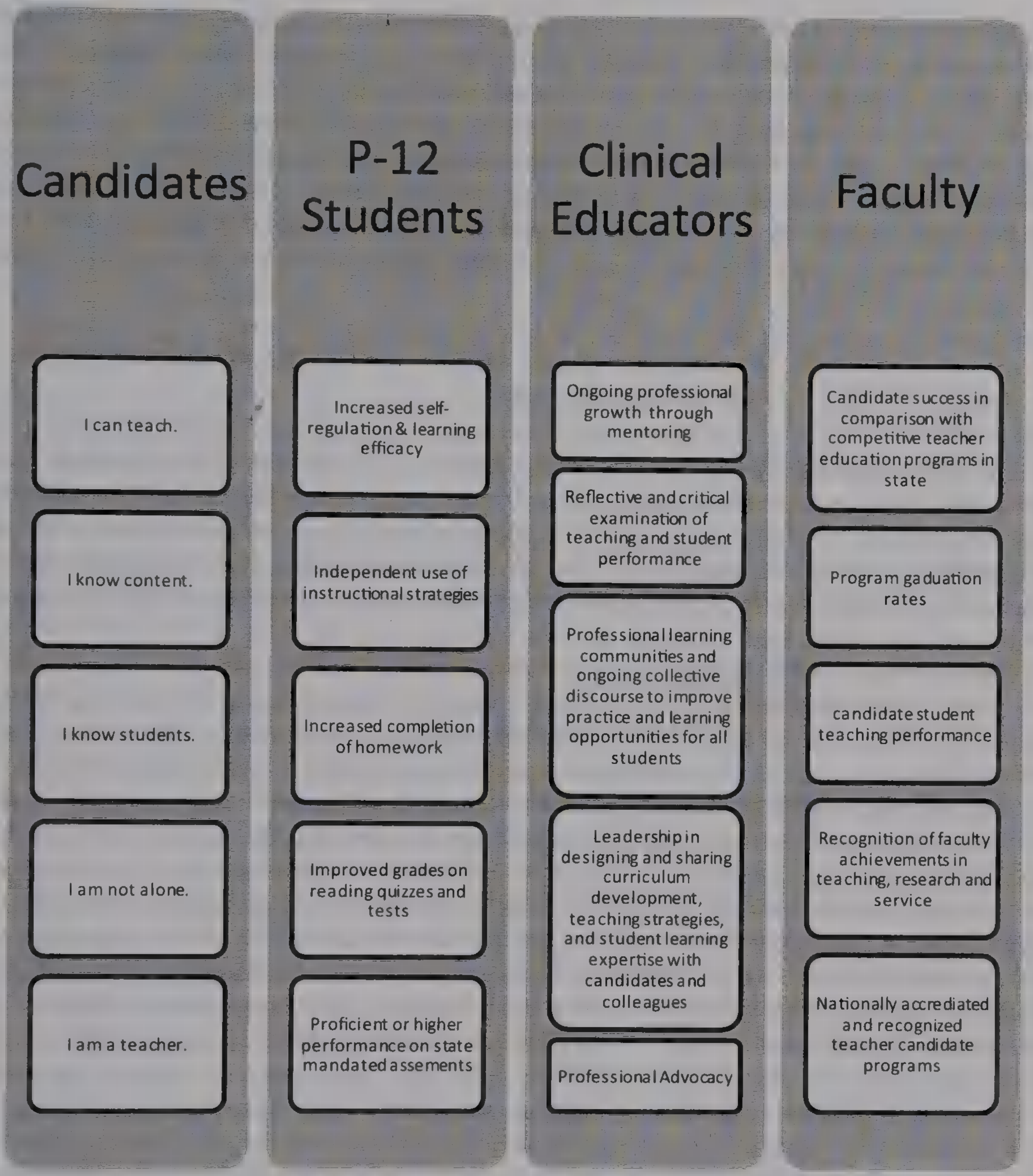

P-12 Schools
Universities & Colleges
co-construct & co-design community arrangements
high quality clinical educators
Clinical Experiences
sufficient depth, breadth, diversity, coherence
responsibility for continuous improvement
candidates' developing effectiveness and positive impact
Teacher Preparation
Documented Evidence and Multiple Growth Measures
Evaluation System
Program Impact on P-12 student learning and development, classroom instruction, and schools

FIGURE 1 Interplay among CAEP Indicators for Clinical Partnerships.

decade of assessment data, we describe the outcomes of this clinical-based methods and tutoring program from the documented impact for each stakeholder (see Figure 2): candidates, high school students, clinical educators (teachers), and university faculty (and the teacher preparation program).

Program Impact for Candidates

Candidates demonstrate growth in pedagogical content knowledge and skills, teaching dispositions, and professional efficacy. Candidates are able to effectively design culturally responsive curriculum, apply research-based pedagogy, and support all students' learning. We define the



Candidates	P-12 Students	Clinical Educators	Faculty
I can teach.	Increased self-regulation & learning efficacy	Ongoing professional growth through mentoring	Candidate success in comparison with competitive teacher education programs in state
I know content.	Independent use of instructional strategies	Reflective and critical examination of teaching and student performance	Program gaduation rates
I know students.	Increased completion of homework	Professional learning communities and ongoing collective discourse to improve practice and learning opportunities for all students	candidate student teaching performance
I am not alone.	Improved grades on reading quizzes and tests	Leadership in designing and sharing curriculum development, teaching strategies, and student learning expertise with candidates and colleagues	Recognition of faculty achievements in teaching, research and service
I am a teacher.	Proficient or higher performance on state mandated assements	Professional Advocacy	Nationally accrediated and recognized teacher candidate programs

FIGURE 2 Documented Evidence for Evaluating Program Impact.

program impact for candidates in efficacy statements from qualitative data analyses of candidate reflections that are supported by quantitative data from performance outcome measures. These are briefly summarized as (a) *I can teach*: Candidates experience growth in professional skills and their ability to impact student learning and influence their students' efficacy; (b) *I know content*: Candidates demonstrate their content knowledge in the successful creation of an in-depth project that includes evidence of curricular alignment with state and national standards;

(c) *I know students*: Candidates exhibit evidence of moving from deficit views of students to practicing culturally responsive pedagogy and differentiated instruction when working with diverse populations; (d) *I am not alone*: Candidates consistently note each semester the learned value of shared experience, reflection, and dialogue with peers and teacher mentors. Candidates also continue to engage with this network of professionals far beyond graduation; and (e) *I am a teacher*: Candidates come to understand what they need to do to be effective teachers and, thus, internalize these strategies as their future pedagogical paradigm. Evidence of this level of practical theorizing and becoming a reflective practitioner is well documented in student teaching evaluations.

Program Impact for High School Students

The shared responsibility of continuous improvement in the clinically based methods course is for the teacher candidates to have a direct impact on student achievement. The success of the teacher education program depends on the ability of candidates to effectively design learning interventions that help all students, especially those who are struggling, achieve academic success. The co-constructed tutoring experience embodies the mutual interest of demonstrating a positive impact on student learning.

One achievement of this program is the improvement students make in their independent use of reading, vocabulary, and study strategies. Emphasis is given each week in teaching students not only strategies but how to monitor and change personal study habits. The ability to track associations among study environments, techniques, time, resources, and scores on homework, quizzes, and tests makes learning processes transparent for students. Candidates guide students with interventions in how to impact study habits to produce desired achievement outcomes. Data from weekly self-regulation charts demonstrate positive shifts in both study habits, techniques, and the associated increases in self-efficacy. Efficacy is documented by alignment of anticipated grades, reported commitment to study plans, and task outcome scores. Benefits of more efficacious learners are measured in terms of individual student achievement as well as dispositional changes. Data on pre-post questionnaires indicate that overall students show increases in their interest and like of social studies and course content, perceptions of their ability to successfully complete homework, and beliefs that they will perform well on tests. These views are supported by student explanations indicating confidence in knowing what needs to be learned, usage of processes that will help them learn, and knowing how to set aside time and space for learning. Students also demonstrate growth in their strategies for learning and note declines in perceptions of test and homework difficulty. This inverse relationship confirms an association between achievement and efficacy. Increases in class performance, such as higher reading quiz scores and improved test scores, further student confidence. As students become more efficacious learners they also are more likely to participate in class, complete homework, and attend school (additional data reported by school partners).

Broader analyses of summative student achievement reveal that the clinical program is positively impacting student achievement. A positive association exists between tutoring participation and pass rates for all social studies courses. Students consistently experience grade improvements from failing to passing grades and higher success rates than peers who do not participate in the tutoring program. In most cases, students achieve grades above standard in all coursework. Not only are these struggling students passing their content courses, but they also all pass the state mandated standardized assessments with scores of proficient or higher. This is a hallmark of the program and a well-documented trend since the inception of the program. The combined success of tutoring participants impacts overall school achievement as measured by external assessments. In comparison to all schools within this system, this school's mean scores exceed all other schools by as much as 30 percentage points and surpass county averages by 11 to 17 percentage points. This level of student impact is not only evident in this content area but also noted as positive achievement gains in the Common Core subjects.

Program Impact for Clinical Educators

The clinically based methods course offers measurable benefits to practicing classroom teachers. The experiences gained by the practicing teachers through their participation help forge a collective group, a professional partnership in which teacher knowledge is affirmed and/or expanded. Ongoing weekly interactions and ongoing dialogue with candidates, faculty, and peers facilitates a professional learning community focused on developing content and pedagogical tools for positively impacting student learning. In addition, teachers invite university faculty to observe their teaching and to address identified areas for improvement through professional development, reading, and research. Through professional learning opportunities that specifically highlight teacher pedagogy and promote candid collaboration and discourse among novice and experienced teachers, growth is achievable and shifts in teacher practice are visible. Outcomes are documented in sustained high overall student achievement.

The tutoring program also helps creates a culture of professional development and growth. Teaming and a strong sense of comradery guide these clinical educators to collectively address state and local mandates, reforms, and requirements. Moreover, investing in teacher preparation is viewed as a shared responsibility with university faculty. The commitment to preparing teachers and mentoring, collective reflections on Praxis, and the implementation of professional development enable these clinical educators to become leaders within the school–university partnership, in their school, community, county, and state. They willingly engage in codeveloped presentations at state conferences, lead county-wide curriculum design efforts, and guide school-based reform initiatives.

Program Impact for Faculty

In the words of Mahatma Ghandi, "You must be the change you wish to see in the world." This clinical partnership serves not only to impact students and candidates but also to influence the research, teaching, and service work of university faculty. Bridging the gap between theory and practice, the relationships engendered create opportunities for faculty to field-test ideas and serve as fertile ground for research. Moreover, the authentic learning context demands that faculty are reflective practitioners and model effective content pedagogy for clinical educators, candidates, and students. Course evaluations are discussed with teachers as data to inform ongoing curriculum revisions to the methods course and tutoring experiences. Weekly meetings occur after each class to debrief the effectiveness of the day's activities; to discuss educational reform initiatives at the local, state, and national levels; and to examine contemporary curriculum theory and policy issues. Faculty are equal partners in the professional learning community and educational team at this school. The ability to engage the perspectives of practitioners continues to inform the work of faculty.

Evaluation Framework for Measuring Program Impact

The touted success of this program does not go unchecked. The value of this clinical partnership to inform the work of the College of Education is its evaluation framework. The use of measurement data to continuously improve its ongoing implementation models affects program practice. The decade old program never ceases to evolve to meet the changing needs of all stakeholders. Figure 3 describes the various measures we use to evaluate program impact. To unpack these multiple measures, we describe our assessments in light of the Feuer et al. (2013) decision-making framework for evaluating teacher preparation programs, but we use only the tutoring project as one aspect of a program to illustrate our thinking about program evaluation with a focus on student growth and achievement.

Assessing CAEP Standards on Clinical Partnerships and Program Impact

Question 1: What is the primary purpose of the TPP evaluation system? As stated, the goals of the tutoring project in the context of this clinical methods course were to (a) create an engaging learning experience in which candidates are given authentic opportunities to demonstrate their developing effectiveness and reflect on impact on student learning, (b) to boost academic achievement of low-achieving students, (c) to affect the learning of the clinical faculty (teachers) working in the program, and (d) to affect the learning and effectiveness of the university teacher educators in the program.

Question 2: Which aspects of teacher preparation matter most? Although providing learning of adults (candidates, teachers, and faculty members) is essential to our goals, the primary purpose of the tutoring model and the teacher preparation program in general is to boost student academic achievement.

Question 3: What sources of evidence will provide the most accurate and useful information about the aspects of teacher preparation that are of primary interest? Figure 3 outlines the multiple measures that comprise our entire program evaluation framework. However, the data on students are most critical. Data sources include formative and summative assessments for P-12 students, which are reported by school to external reviewers. These include state-mandated standardized assessments, school quality measures, student attendance and graduation rates, teacher evaluation, and performance data. Pre–post student questionnaires documenting changes in student perceptions of learning and school-based performance tracking of homework, quiz, test, and course grades are program specific and cross-validate university measures of candidate impact on P-12 learners.

Question 4: How will the measures be analyzed and combined to make a judgment about program quality? Candidates collect pre–post questionnaire data in which they interview the high school students in the tutoring program about perceptions of homework, quizzes, tests,

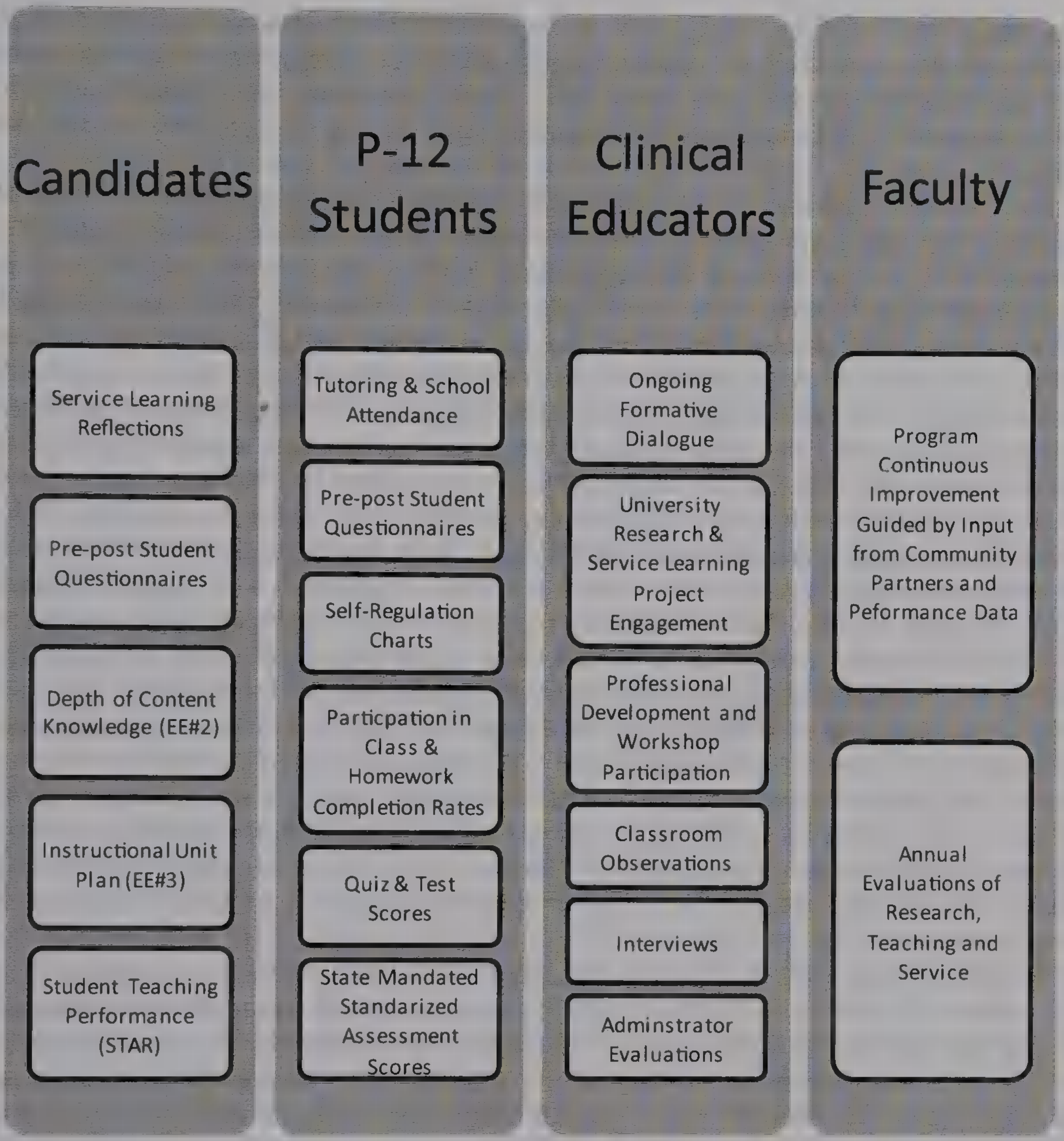

Candidates
Service Learning Reflections
Pre-post Student Questionnaires
Depth of Content Knowledge (EE#2)
Instructional Unit Plan (EE#3)
Student Teaching Performance (STAR)
P-12 Students
Tutoring & School Attendance
Pre-post Student Questionnaires
Self-Regulation Charts
Particpation in Class & Homework Completion Rates
Quiz & Test Scores
State Mandated Standarized Assessment Scores
Clinical Educators
Ongoing Formative Dialogue
University Research & Service Learning Project Engagement
Professional Development and Workshop Participation
Classroom Observations
Interviews
Adminstrator Evaluations
Faculty
Program Continuous Improvement Guided by Input from Community Partners and Peformance Data
Annual Evaluations of Research, Teaching and Service

FIGURE 3 Multiple Growth Measures for Evaluating Program Impact.

and readings. Responses include Likert scales measuring perceived difficulty, interest, and like. Students also report study habits associated with various content tasks. Data are initially used as diagnostic analysis of learning habits and provide a context for interventions in tutoring sessions. Postquestionnaire data are used by candidates to determine if change in student perceptions could be measured at the end of the tutoring experience. Pre–post data are also entered into a database to be evaluated over time by university faculty for the purpose of identifying patterns in student perceptions and efficacy. Data outcomes are reported to school partners to provide evidence of self-identified struggles with homework, quizzes, tests and assigned readings. Data are used to modify tasks, content readings, and assessments to more effectively meet the needs of students. Likewise, university candidates examine data to understand patterns experienced by struggling students and to collectively explore from course readings instructional interventions to scaffold learning for all students. Data also serve to inform program evaluation decisions by measuring candidate impact on student perceptions as an outcome of engagement in the tutoring program.

As school partners, teachers engage weekly with candidates to provide achievement data about tutoring participants. They also offer formative assessment of student participation and preparation. Additional student information is shared to provide a context for helping candidates understand the needs of their tutee. The engagement of clinical educators is assessed based on their involvement in the program and from interviews conducted by research faculty. Interviews are transcribed and coded by graduate assistants. Faculty evaluate qualitative data to provide rich descriptions of clinical partners experiences and to note patterns related to changes in instructional perceptions, pedagogy, and praxis. Results are shared in professional learning communities to inform practice and with administrators to document evidence of leadership.

A self-regulation study habits chart is completed each week for tasks associated with the social studies course. Students report what they did to complete homework tasks. They indicate how they studied; read; used strategies; worked in what environment, when, and how long; and if they completed the task with or without distractions. In addition, predict achievement scores with scales of likelihood that they will make the anticipated grade. Candidates keep record of student habits to provide data to students to document connections between study/work habits and achievement outcomes. When discrepancies emerge between predictions and actual outcomes, candidates help students explore reasons that could have attributed to unexpected performance grades. The purpose of these data is to inform students that they have control of their learning. They also help build awareness of good and bad study habits. Simple recommendations of no distractions often result in positive scores. Over time, these data reinforce students' growth in learning efficacy. Data are also compiled and analyzed across semesters by faculty to document program impacts.

Individual student progress tracking is completed by teachers to document changes in student achievement. Homework, quiz scores, and test scores are reported to candidates as feedback on student learning. Data are collected and evaluated for all students by the department chairperson. Means and standard deviations are reported to university faculty. Course grades for students in the tutoring program are tracked by school partners and reported semiannually to university faculty. These achievement results are used by the PDS steering committee to evaluate the effectiveness of the tutoring program to support student achievement.

Achievement scores are reported by the school system to school partners who share these data with university faculty. School-level data are discussed to determine areas that were specifically supported by tutoring programs and to identify other areas that need intervention. Individual student data are coded so that achievement of tutoring participants can be measured. Data consistently indicate a positive association between participation in tutoring and targeted scores on standardized assessments.

Question 5: What are the intended and potentially unintended consequences of the evaluation system for TPPs and education more broadly? Data are used to inform program improvement. Results are discussion points among community partners that guide course and clinical experience reforms and affirm best practices that are being employed. Outcomes are also shared within the department and serve as the impetus for other clinically based course endeavors. Control over who sees what data is an important aspect of ensuring that results are used for intended purposes. Communicating the purpose of data and how results should be used is also an important aspect of our evaluation plan. When evaluating student performance data at the program level, we examine content areas collectively rather than singling out a specific teacher. Our goal is to promote a noncompetitive, team approach to examining results for mutually beneficial outcomes.

Unintended uses of data are important considerations with any evaluation framework. We continue to be sensitive to this possibility. We are aware of the limitations of the scope of our work and how these can be perceived in the broader community. For example, early in the program's implementation, we were contacted by members of the school community who expressed concerns that their children's school did not have access to a similar university-supported tutoring program. School scores on standardized assessments were (and continue to be) high-stakes, public access data. These community members were well aware that this high school had the highest scores in the county and had been told by the school system's administration that the source of this school's success was the university-based tutoring program. This community concern as well as the narrow impact that an in-depth partnership such as this engenders are limitations of our clinical model. However, communicating to the broader community the need for deep dives into content and pedagogy in rich clinical environments as an attribute of quality educator programs is necessary to explain the purpose of such structures and partnerships.

Question 6: How will transparency be achieved? What steps will be taken to help users understand how to interpret the results and use them appropriately? The tutoring component of the larger program has been made visible through multiple means, including extensive publication and presentation of results. It is also a primary part of the overall program review through university and national accrediting agencies. Once-a-year results from all assessments administered by the programs are disseminated to the faculty in the College of Education. The data are discussed during a final faculty meeting, and action steps are determined to address any identified program needs. All data reports created by the College of Education are housed on a secure website accessible to all faculty within the College of Education. All of the information about the evaluation is easily accessible (through the Internet and/or PDS meetings) and communicated in a way that is understandable to users and the public.

Question 7: How will the evaluation system be monitored? The evaluation framework and the implications of results are monitored by university and school partners. The shared responsibility in assuring the accuracy, reliability, and validity of the measures and methods is studied by both the university and school partner. Oversight is provided by the PDS steering committee, which comprises school administrators, teachers from all departments, and university faculty. Collectively, clinical educators and faculty consider adaptations to the evaluation system as expectations for curriculum, teacher preparation, and teacher evaluation change. In addition, the program coordinator reports program impact data to the department, college, and university to assure that the program is shifting to meet contemporary educational demands for educators and the rigor of content preparation for teaching in secondary schools.

CONCLUSION

We believe the new CAEP standards will achieve its primary goal of improving teaching and learning through making the accreditation process more rigorous and outcome-focused. In its first annual report, CAEP (2013) stated, "We believe that CAEP can elevate educator preparation to the new level of excellence that the public and its policymakers expect" (p. 7). Indeed, a focus on student learning and development through program impact will be a welcome change for the public and educators who want to show the value of their teacher preparation programs. However, the work will not be easy. We recognize the important contribution of the value-added studies that link teacher education "portals" (Henry et al., 2014) in our state to K-12 student achievement and we encourage the development of more such studies. We also acknowledge the limitations of those studies, one of which is that they do not directly impact student learning during the teacher education preparation process.

In this article, we illustrate one example of how teacher candidates might directly impact student achievement. In this article we reflect on how educators can plan evaluation of their programs and address CAEP standards. We show how educators might think about two of the CAEP standards, Clinical Partnerships and Practice (Standard 2) and Program Impact (Standard 4), how they intersect, and how careful planning around those standards might address many of the indicators of both standards. We have showcased one aspect of secondary education teacher preparation program, a requirement to participate in a clinically based methods course which includes a tutoring program. We have examined this component of the program in light of the Feuer et al. (2013) framework for evaluation of teacher preparation programs.

The tutoring intervention addresses the CAEP indicators of Clinical Partnerships Practice that relate to program impact described earlier. First, the "Partners co-construct mutually beneficial P-12 school and community arrangements." Meaningful and purposeful clinical partnerships are imperative to an authentic preparation program. In our program, clinically based teacher preparation underscores the importance of building mutually beneficial partnerships. A shared emphasis on student learning outcomes and candidate effectiveness are hallmarks of a mature university-community partnership (Darling-Hammond, 2010b; NCATE, 2010).

The traditional view of university faculty as experts guiding the work of school practitioners is long past and should be (NCATE, 2010). Our tutoring program illustrates a "shared responsibility for continuous improvement of candidate preparation" (CAEP Standard 2 [2.2]) and how partnerships can "co-select, prepare, evaluate, support, and retain high-quality clinical educators ... who demonstrate a positive impact on candidates' development and P-12 student learning and development" (CAEP Standard 2 [2.3]). From the beginning, the program was coconstructed and codesigned, and the success of the program is dependent on this collaboration. University faculty, school-based teachers, and teacher education candidates examine student achievement data together and make instructional decisions to improve the program.

Finally, and most important, the tutoring program illustrates how the university faculty members, in collaboration with the classroom teachers can "design clinical experiences of sufficient depth, breadth, diversity, coherence, and duration to ensure that candidates demonstrate their developing effectiveness and *positive impact on all students' learning and development*." Similar to a few other examples found in the literature (Wise, Ehrenberg, & Leibbrand, 2008), this article illustrates one way that a teacher preparation program might include a component that directly impacts student learning. The tutoring program provides a spectrum of formative and summative growth measures across the course of the candidates' program, and deeply within the tutoring program. The diversity of assessment measures showcases the broad scope of impact for all stakeholders, including the high school students for whom it was designed.

As programs seek to develop comprehensive evaluation models to measure impact and effectiveness outcomes, we recommend using the Feuer et al. (2013) decision-making framework to initiate discussions and guide design work. Although we used the report's questions to explain and confirm measurement purposes, it has the potential for gauging and identifying curricular or clinical misalignment as well as gaps in data collection tools. Teacher preparation is important business that should not go unchecked. New CAEP standards affirm the importance of connecting candidate learning with student achievement. The language of CAEP indicators reflects the new thinking for accreditation of teacher preparation programs—that the clinical partnerships go beyond positive relationships, co-selection of mentor teachers and candidates, and commitment to diverse settings—to all of these indicators and a simultaneous requirement that *P-12 student achievement* is at the forefront of the partnership. Documenting the complex impact outcomes, such as those in our model, can become more visible to all who have a vested interest in the success of school children and those who teach them.

AUTHOR BIOS

Tina Heafner, Ph.D., is a professor in the College of Education at the University of North Carolina, Charlotte. She has produced and contributed to numerous publications on the topic of teacher effectiveness and preparation in social studies education.

Ellen McIntyre, Ed.D., is the Dean of the College of Education at the University of North Carolina, Charlotte. Her research interests have been in elementary reading and teacher education. Most recently she has been awarded a $3.1M NSF grant to study the impact of an innovative elementary teacher preparation program.

Dr. Melba Spooner is the Senior Associate Dean in the College of Education at the University of North Carolina, Charlotte. Her research interests are school and university partnership, teacher development and preparation, and alternative methods of course delivery and routes to licensure.

REFERENCES

Cibulka, J. G. (2011). The new normal: Challenges and opportunities for the transformation of educator preparation. *Quality Teaching, 21*, 1–10.

Cole, A. L., & Knowles, J.G. (1993). Teacher development partnership research: A focus on methods and issues. *American Educational Research Journal, 30*, 473–495.

Council for the Accreditation of Educator Preparation. (2013). *Council for the Accreditation of Educator Preparation Report to the Public, the States, the Policymakers, and the Education Profession*. Retrieved from http://caepnet.files.wordpress.com/2013/05/annualreport_final.pdf

Darling-Hammond, L. (2010a). *The flat world and education: How America's commitment to equity will determine our future*. New York, NY: Teacher's College Press.

Darling-Hammond, L. (2010b). Teacher education and the American future. *Journal of Teacher Education, 61*, 35–47.

Darling-Hammond, L., McLaughlin, M., Milbrey, W. (1995). Policies that support professional development in an era of reform. *Phi Delta Kappan, 76*, 597–604.

Feuer, M. J., Floden, R. E., Chudowsky, N., & Ahn, J. (2013). *Evaluation of teacher preparation programs: Purposes, methods, and policy options*. Washington, DC: National Academy of Education.

Hammerness, K., Darling-Hammond, L., Grossman, P., Rust, P., & Shulman, L. (2005). The design of teacher education programs. In L. Darling-Hammond & J. Bransford (Eds.), *Preparing teachers for a changing world: What teachers should learn and be able to do* (pp. 390–441). San Francisco, CA: Jossey-Bass.

Henry, G. T., Bastian, K., & Fortner, C. K. (2011). Stayers and leavers: Early career teacher effectiveness and attrition. *Educational Researcher*, *40*, 271–280.

Henry, G. T., Purtell, K. M., Bastian, K. C., Fortner, C. K., Thompson, C. L., Campbell, S. L., & Patterson, K. M. (2014). The effects of teacher portal entry on student achievement. *Journal of Teacher Education*, *65*, 7–23.

Larson, A. E. & Kyle, D. W. (2014/this issue). Introduction to clinical partnerships in teacher education: Perspectives, practices, and outcomes. *Peabody Journal of Education*, *89*, 415–418.

National Council for Accreditation of Teacher Education. (2010). *Transforming teacher education through clinical practice: A national strategy to prepare effective teachers*. Report of the Blue Ribbon Panel on Clinical Preparation and Partnerships for Improved Student Learning. Washington, DC: NCATE.

Wise, A. E., Ehrenberg, P., & Leibbrand, J. (Eds.). (2008). *It's all about student learning: Assessing teacher candidates' ability to impact P-12 students*. Washington DC: National Council for Accreditation of Teacher Education.

PEABODY JOURNAL OF EDUCATION, 89: 533–546, 2014
Copyright © Taylor & Francis Group, LLC
ISSN: 0161-956X print / 1532-7930 online
DOI: 10.1080/0161956X.2014.939007

Routledge
Taylor & Francis Group

Clinical Partnership at a Distance: A Design That Transforms Teaching and Leadership

Alyson Adams and Dorene D. Ross
University of Florida

In this article we describe a graduate program for practicing teachers at the University of Florida. Offered in a blended format (mostly online but supported by a local faculty member), the program embeds graduate work within school reform efforts in hard to staff schools in partner school districts up to 350 miles away from campus in order to directly address the needs of practicing teachers in their own contexts. The article describes the program, critical design considerations for clinical partnerships at a distance, and presents the results of three completed studies and a description of one ongoing study of program impact.

The National Council for Accreditation of Teacher Education (NCATE; 2010) Blue Ribbon Panel report on clinical preparation and partnerships issued a call to put clinical practice at the center of teacher preparation. Although the panel focuses on initial teacher preparation, the same principle should apply to graduate education for experienced teachers. Over a decade ago, Tom (1999) called for the reinvention of master's programs in education to be more like high-quality professional development with tighter connections to teaching practice and student learning. Only a few graduate programs responded with a reinvented master's degree centered on clinical practice, with programs at George Mason University (Galluzzo, Isenberg, White, & Fox, 2012), Western Michigan University (Muchmore, Marx, & Cromwell, 2002), and Montclair State University (Taylor, Goeke, Klein, ONore, & Geist, 2011) providing three notable examples. The Teacher Leadership for School Improvement program at the University of Florida (UF) provides a related model for graduate programs in education by embedding graduate work within school reform efforts in hard-to-staff schools and by building partnerships with school districts up to 350 miles away from campus to directly address the needs of practicing teachers in their own contexts. In this article we describe the program, critical design considerations for clinical partnerships at a distance, and emerging research on program impact.

CONTEXT AND PROGRAM DESCRIPTION

The Teacher Leadership for School Improvement (TLSI) program was developed to provide an advanced degree option for practicing teachers who wanted to improve teaching practice and

---

Correspondence should be sent to Alyson Adams, University of Florida, G-315 Norman Hall, Box 117052, Gainesville, FL 32611. E-mail: adamsa@coe.ufl.edu

student learning outcomes without leaving their full-time teaching positions. Because context played an important role in program development, we begin with a description of context and then move to the conceptual frameworks that informed program design.

Contextual Background

The TLSI program grew out of a request for university engagement to support schools with a history of low performance and high teacher turnover. Capitalizing on ongoing partnership reform efforts provided by an endowed center in the UF College of Education (The Lastinger Center for Learning), the academic department developed an advanced graduate program to dovetail with professional development initiatives from the Center in order to meet the specific needs of teachers in partnership districts.

The first challenge was logistical: UF is located in suburban North Central Florida and the partner districts included large urban centers (Miami, Jacksonville, St. Petersburg) and migrant farming communities (Immokalee, Homestead) ranging from 125 to 350 miles away. We built our program on the notion of partnership at a distance. Without regional campuses in communities such as those in the Western Michigan program or a locally provided, face-to-face program such as Montclair State, we had to think differently about university presence and course delivery.

The next contextual challenge was related to the realities of working in high-poverty, low-performing schools that often needed to build leadership and teaching capacity. The Center and the graduate and professional development programs were committed to building teacher capacity for high-quality teaching and leadership to support the schools in sustaining improvements. Therefore, we viewed our program as a recruitment, retention, and development tool, with the Center securing funding for full-tuition scholarships for teachers in partnership schools who make a 5-year commitment to stay in their schools and build critical capacity. Over time, the TLSI program has expanded and no longer focuses solely on fully funded teachers within partnership schools. However, it is important to note that the program was developed in this context because the goal of meeting the needs of hard-to-staff schools permeates the ethos of the program and is quite different from the manner in which many traditional university-based graduate programs are developed.

With a focus on building capacity for teaching and leading, simultaneously, the TLSI program was designed to help teachers develop as master teachers, teacher researchers, and teacher leaders who improve student outcomes and help their schools improve. In this way, the program was designed to build capacity for whole school reform. Although the learning of each teacher is important, the program was intended to have broader impact than individual teacher growth. The three overarching concepts of teacher identity became the program goals, with all courses, assignments, and activities contributing to development of relevant knowledge, skills, and dispositions. The broad goals are defined next:

- **Master teacher**: A master teacher takes responsibility for all learners. A master teacher designs and delivers high-quality instruction for his or her students and continuously evaluates outcomes using varied measures and methods to refine and adapt teaching practices to meet the needs of learners.

- **Teacher researcher**: A teacher researcher systematically studies his or her own teaching practices on an ongoing basis. This involves the analysis of multiple data sources to inform instructional decision making to maximize successful outcomes for students.
- **Teacher leader**: A teacher leader assumes formal and informal leadership and mentoring roles within and beyond the school community and serves as an advocate for students and families. These leadership functions serve to improve educational outcomes and improve the effectiveness of the professional community.

Theoretical Foundation

The program was developed from literature bases related to teacher education, teacher leadership, and professional development and informed by a view that teaching requires adaptive expertise involving innovation, inquiry, and careful analysis of learning rather than the adoption of a set of standardized best practices (Hammerness, Darling-Hammond, & Bransford, 2005). The teacher education literature, although primarily focused on preservice teacher education, emphasizes the importance of lifelong learning, inquiry, critical reflection, and fusions of theory and practice as strategies that facilitate the development of this adaptive expertise (Hammerness et al., 2005; NCATE, 2010; Zeichner & Liston, 1996).

Literature on professional development for practicing teachers (Cochran-Smith & Lytle, 1999; Desimone, 2009), graduate programs for practicing teachers (Molseed, 2009; Taylor et al., 2011), and the development of teacher leaders (York-Barr & Duke, 2004) suggests the significance of these same factors. Just as the preservice literature increasingly emphasizes the importance of situating novice teacher learning in practice, the literature related to practicing teachers emphasizes the importance of situating their learning within their specific teaching contexts. Across these bodies of literature is an emphasis on views of learning as situated, social, and distributed (Lave & Wenger, 1991; Putnam & Borko, 2000).

In a previous program description, we provide a thorough overview of the conceptual grounding of the program across these multiple bodies of literature (Ross et al., 2011). In the following brief description of the guiding principles, we emphasize the connection between program design and the guidelines for effective professional development synthesized by Desimone (2009).

The first guiding principle is that coursework is designed to be *job-embedded*. Effective learning is situated within the teacher's immediate context and in collaboration with others (Lave & Wenger, 1991; NCATE, 2010; York-Barr & Duke, 2004). Ross et al. (2011) explained that within TLSI job-embedded means "teachers learn new pedagogical strategies, implement them in their classrooms, collect evidence of student learning, reflect on practice with others, and then refine their practice" (p. 1214). The second connected principle is a pervasive focus on *inquiry and reflection*. The significance of the second factor is that it makes current practice public, links teacher and student learning, and facilitates the development of a critical stance toward teaching in which teachers systematically analyze evidence of their impact on student learning. Within the TLSI program, inquiry is introduced in the first course and embedded within every program course. Desimone (2009) noted that effective professional development is grounded in active, contextual learning that includes strategies such as observation, interaction with others, analysis of student work, and leading discussions. Within TLSI, the job-embedded structure and focus on inquiry and reflection enable teachers to use their classrooms and schools as laboratories of practice in which they actively test new learning and examine the impact within their specific contexts (Muijs & Harris, 2003).

A third connected principle is that learning is *collaborative* (NCATE, 2010; Zeichner & Liston, 1996). Desimone (2009) emphasized that professional development is more powerful when done in collaboration with others from the same school. The TLSI program targets two to six teachers within each school, focuses on cohorts of teachers within districts, and utilizes multiple strategies to encourage collaboration. These strategies include collaborative discussions and projects, face-to-face interactions in the local context, and participation in and development of school activities using principles of effective professional learning communities (Louis & Marks, 1998; Vescio, Ross, & Adams, 2008).

A fourth guiding principle is a focus on an *individually selected content area*. Desimone (2009) argued that content focus is a foundational element of effective professional development. However, for elementary teachers the definition of "content focus" within an advanced graduate degree can vary as some teachers focus on one content area and others have broad responsibility across all curricular areas. Within TLSI, the content focus is addressed in two ways. First, each teacher selects a four course content specialization based on his or her professional goals and teaching assignment, enabling the teacher to develop in-depth knowledge and skills within the selected content area. Second, the inquiry structures within each course enable teachers to examine strategies drawn from general pedagogy (e.g., backward design, culturally responsive teaching) as applied to a specific content area within his or her context. In this way the program is heavily content focused, although there is not a single common content area.

The final principle is *promotion of school organization conditions* to enhance leadership and learning. Desimone (2009) noted that effective professional development must be coherent within the context of other activities within the school so that it is aligned with the school's expectations of teachers and the teachers' professional goals and perspectives. Hochberg and Desimone (2009) stressed that this is an especially significant issue in high-need schools where teachers may face requirements such as mandated use of curriculum materials and strict pacing guides. The role of the Professor-in-Residence (PiR), which is described next, is a critical structure for enabling the program to create coherent, job-embedded coursework and to support teachers in the implementation of learning within specific contexts.

Program Overview

From these contextual and theoretical bases, we developed a program that could exist fully online, but had blended components where university partnerships existed. We used an online platform, combined with PiRs, who are university faculty hired to live in the partner districts and support local graduate students. The PiRs most often already live and work in these districts and are familiar with the context and have professional networks that provide knowledge of and access to district policies and practices.

The program comprises 36 credits, resulting in either a Masters (M.Ed.) or a Specialist (Ed.S.) degree. Designed for full-time teachers in schools with the multiple challenges, mandates, and state oversight typical in low-performing schools, the program includes one course per 8-week distance education term. Teachers take one course at a time and finish in $2\frac{1}{2}$ years. Teachers are recruited in cohorts from partner school districts, often with two to six teachers from a school admitted together to maximize opportunities for situated, social, and distributed learning (Putnam & Borko, 2000).

Keeping in mind the goals of developing teachers as master teachers, teacher researchers, and teacher leaders, the program design includes a core set of courses in general education content, focused on advanced pedagogy, inquiry, equity, and leadership:

- Guided Teacher Inquiry (3 credits)
- Culturally Responsive Classroom Management (3 credits)
- Meeting the Educational Needs of Students in Poverty (3 credits)
- Transforming the Curriculum (3 credits)
- Differentiated Instruction (3 credits)
- Teacher Leadership for School Improvement (3 credits)
- Instructional Coaching for Enhanced Student Learning (3 credits)
- Portfolio Preparation (3 credits total, separated into two courses to implement learning)

The focus on equity and social justice is particularly important because the majority of our participants teach in high-poverty, high-minority schools with diversity in culture, language, and ethnicity. In addition to core courses, teachers take four courses in a specialization area to focus on advanced content knowledge and pedagogy. Options include mathematics, science, media literacy, reading, educational technology, and early childhood.

Coursework and assignments, focused on practice and informed by theory, are designed to be job-embedded and immediately applicable in classrooms. PiRs provide insider knowledge about mandates and practices specific to each district that inform the language used to introduce concepts and the assignments designed. Linking coursework to classroom practices and district policies helps teachers see the alignment between graduate work and their daily classroom work, giving them permission to try new things because they are consistent with district expectations.

Courses are designed to be heavily dialogue based, meaning that teachers read or view content and then engage in discussions to deepen their understandings and connect and reflect about how the new learning fits within their contexts. The online courses rely heavily on threaded discussions and asynchronous activities to maximize the flexibility for teachers to work around the busy lives of full-time educators. At the conclusion of the program, teachers prepare a final portfolio to demonstrate their growth as master teachers, teacher researchers, and teacher leaders. In this portfolio, teachers include artifacts with written rationales connecting the activities to their development as professionals, reflecting on the implementation of ideas learned in coursework. Prior to graduation, the teachers complete the portfolio with support of a portfolio coach, and then defend their work to a committee.

CLINICAL PARTNERSHIP AT A DISTANCE

The TLSI program is an example of a graduate program that is clinically centered and focused on job-embedded teacher learning, yet operating with university partnerships at a distance. In this section we examine two critical elements in the development of programs such as this: program coherence and a nested system of supports.

Program Coherence

In any teacher education program, but particularly one delivered at a distance, a critical aspect to consider is program coherence. This is important in both design and implementation.

Coherence in Design

Zeichner and Conklin (2008) have long argued the importance of conceptual foundations in preservice teacher preparation. Programs with coherent vision and explicit views about teaching and learning that permeate coursework and clinical work have a greater impact on participant learning. Arguably, the same should be true for graduate programs, though less is written about the need for conceptual coherence at that level. Conceptual coherence might be seen as even more critical in a distance education program where most students never step foot on campus, and students are full-time teachers in schools with distinct visions and missions. In the TLSI program, the goals of developing teachers as master teachers, teacher researchers, and teacher leaders, guided the development of the program of study, and guide the content and activities in each core course.

Focusing on the concept of master teacher helped us solidify our vision of high-quality teaching, informed by instructional frameworks by Marzano (2007) and Danielson (2007) (evaluation frameworks used in partner districts), as well the Culturally Responsive Instruction Observation framework (Powell et al., 2011) and the Classroom Assessment Scoring System focusing on student–teacher interactions (Pianta, La Paro, & Hamre, 2008). Our conception of teacher leadership drew on literature (York-Barr & Duke, 2004) and professional standards for teacher leadership (Teacher Leadership Exploratory Consortium, 2012). Finally, our definition of teacher researcher was developed based on literature on teacher inquiry (Cochran-Smith & Lytle, 2009; Dana & Yendol-Hoppey, 2009) and the views of "knowledge of practice" (Cochran-Smith & Lytle, 1999). In addition to collaborative clarification of these program goals through faculty interaction, we developed a set of design principles for courses (see the appendix) to ensure that consistency in course design. The design principles covered not only our conceptual underpinnings but also our expectations about how learning should be structured within courses.

Coherence in Program Implementation

We work to sustain coherence through three programmatic elements: differentiated roles for faculty, regular and focused faculty meetings, and informal and formal formative assessment. First, on and off campus faculty play different yet equally important roles. The on-campus faculty members focus on design and refinement of course content to ensure content is up to date with current trends as well as evidence-based practices. PiRs, local experts on the realities of teachers in our partner districts, provide important insight that guides the job-embedded focus of the courses. These faculty members work together to ensure continual and simultaneous integration of theory to practice and vice versa. Courses are reexamined on a rotating basis to ensure that they are current and relevant and seamlessly connected to the daily work of educators. The traditional boundaries of theory and practice are also blurred because all program faculty (on and off campus) have a substantial grounding in school reform work within university partnership schools. This strong connection to school reform initiatives grounds the program in common understandings about the complexities of teaching and the realities of high-need schools.

To maintain strong connections among faculty members separated by distance, all program faculty meet on campus three to four times a year. The half- to full-day program faculty meetings enable faculty to focus on program enhancement, refinement, and research, and often involve teams of faculty members examining a course and modifying assignments or readings to increase the job-embeddedness.

Finally, in the cycle of continuous improvement, both formal and informal program evaluation helps to provide student and district input into program design and implementation. Focus groups of district stakeholders during the design stage provided input on content and language related to current mandates. This coherence of content and language helps students see how coursework and classroom work are aligned. Also, prior to graduation, students provide program feedback in exit interviews and on anonymous surveys. This input has resulted in program revisions such as refinement of the portfolio coaching process and the sequence of coursework in the program. Formal program research is also conducted regularly to both inform program design and disseminate findings related to program impact. The use of formal and informal data to inform program decisions is an element of teacher education program design that is powerful yet frequently overlooked (Zeichner & Conklin, 2008).

Nested System of Supports

Another important feature is the availability of and reliance on a nested system of supports that aligns graduate program work within simultaneous school reform efforts. As mentioned previously, the graduate program was developed in collaboration with an endowed center in the college, the Lastinger Center for Learning. The TLSI program, designed to boost teacher and leadership capacity, is the most intense intervention provided to partner districts. This graduate program is intense professional development where participants spent 10 to 15 hr a week, over a period of $2\frac{1}{2}$ years, learning and implementing new strategies all focused on improved student learning as the ultimate outcome. The Lastinger Center located funding for full tuition scholarships, first from private, philanthropic sources and then from district professional development funds as the effectiveness of the program became apparent.

The nested system of supports provides teachers a laboratory in which to try the leadership skills gained through the graduate program and provides professional development for personnel at a number of levels above the teachers to gain buy-in and support for teachers to try new ideas with a level of freedom and autonomy. The nested system also includes colleagues beyond the graduate program to ensure that ideas have the critical mass to take root in schools that often have insufficient teaching and leading capacity prior to partnership. The idea of a nested system developed as the work of the Lastinger Center evolved. From experience and research, we know that one of the most powerful elements of student success is the teacher; therefore, the initiatives of the center consistently focus on improving teacher learning. However, we also know that sustained change is unlikely if the culture of a school is not supportive and collaborative. In addition, without strong leadership at the school level, even the most promising teacher initiatives will not succeed. Finally, individual school initiatives are doomed to failure if district and state policies and practices are not aligned and supportive (Hochberg & Desimone, 2010). The following nested system of supports scaffold TLSI teachers.

Inquiry-Focused Professional Learning Communities

The Lastinger Center focuses on teacher learning within professional learning communities (PLCs). For PLCs to impact teacher learning and student outcomes, they must include collaboration, a focus on student learning, increased teacher authority, and continuous teacher learning (Vescio et al., 2008). The PLCs in the partner schools focus on teacher inquiry in which all interested teachers systematically study their practice and collect evidence of impact on student and teacher learning. A year-end inquiry showcase provides a place for teachers to present their inquiries and includes both TLSI teachers and their colleagues. The TLSI teachers are often tapped for facilitative leadership in these inquiry groups and receive training based on the National School Reform Faculty Critical Friends Group training. In this way, the inquiry groups become opportunities for the TLSI teachers to try out their teacher leadership skills as they help their colleagues use inquiry to improve practice.

Principal Professional Development

As mentioned previously, principals are an essential element in the nested system of supports. Principals need to learn how to structure their schools to support continuous teacher learning and provide verbal encouragement and a safe environment for teachers to experiment with new practices. Through structured principal professional learning communities, school-based leaders learn how to analyze and shape their schools' collaborative cultures, study their own practice as leaders, and visit schools to observe and discuss powerful teacher learning structures.

Professors-in-Residence

The PiR is a key element in both the graduate program and the Lastinger Center's professional development efforts. The PiR straddles both entities, serving as faculty member in the graduate program and professional development specialist in the district reforms. In many cases, the PiR sits in school leadership team meetings as a participant and consults with the principal and the district leaders about initiatives that impact teachers and students. In addition, the PiR advocates for the developing graduate students, suggesting them as potential leaders of professional development sessions or as key personnel in school-based initiatives. In this way, the graduate students get support to try their new skills in teaching and leadership under the scaffolded guidance of a knowledgeable mentor.

These nested systems of support create alignment due to the consistency between the Lastinger Center's efforts and the underpinnings of the graduate program. In fact, the TLSI faculty program coordinator has dual appointments in the academic department and the Center, and other TLSI faculty members are often affiliated with the Center to support reform efforts.

IMPACT OF THE TLSI PROGRAM

To date we have completed three studies of the impact of the TLSI program. A fourth external evaluation using an experimental design is in process. A brief summary of the three completed studies and description of the study in process follow.

Study 1: Survey

Adams et al. (2013) conducted a survey study of 33 graduates to examine the perceived impact of the graduate program on practice and skills related to the three program goals of developing master teachers, teacher researchers, and teacher leaders. The focus question for the research was, Do teachers report changes (before and after the program) in their instructional practices, the nature of their collaboration with peers, their leadership roles, and their participation in teacher research? To prevent response shift interference, a retrospective pre-post design was used. Of the 33 graduates invited to participate, 25 completed the survey. Out of 30 items on the survey, 23 indicated significant difference in the frequency of behavior from pre- to posttest ($p < .05$). Survey results indicated that graduates perceived changes in their abilities and actions related to teacher research, instructional practices and curricular design, and teacher leadership as a result of participation in this graduate program.

Study 2: Interviews With Graduates and Their Principals

Ross et al. (2011) conducted a qualitative, interview-based study to examine teachers' and principals' perceptions of the impact of the TLSI program. The impact was investigated through 30- to 60-min interviews with 20 graduates and six principals. The researchers initiated the study to determine the impact of the program on the knowledge and skills of the teachers. Data analysis revealed many changes in knowledge and skills, but the researchers were struck by the fact that 16 of the 20 teachers used words indicating that their thinking about their work had substantially transformed. Using Mezirow's (2000) concept of transformational learning, the study documents transformation of teachers' frames of reference: two related to teaching (adopt an inquiry stance; learn to view oneself as an autonomous professional), and two related to leadership (adopt a leadership stance; view student learning as a communal responsibility). The researchers found that all teachers demonstrated evidence of shifts in at least one frame of reference and 16 demonstrated shifts in all four frames. Data from principals reinforced the perspectives expressed by the teachers. The study suggests this graduate program led to transformation in the ways that teachers "understood and approached teaching and leadership" (p. 1220) and provides strong evidence that teachers adopted an inquiry stance (Cochran-Smith & Lytle, 1999) that empowered them to act as autonomous professionals who could advocate for students and justify their instructional decisions with student learning data.

Study 3: Longitudinal Study of Program Impact on Student Achievement

Jimenez and Leite (2012) used 11 years of Florida Comprehensive Achievement Test standardized test scores to track student scores over time, specifically comparing the results of teachers in the

TLSI program against expected gains for all students statewide. They looked at student scores before, during, and after teachers' participation in the TLSI program using Interrupted Time Series method, which is similar to single subject design that tracks outcomes based on an intervention. In this case, the TLSI program was the "intervention." Data were analyzed using a cross-classified random effects model, similar to value-added models currently being used to assess teacher performance based on student outcomes, but using 11 years of outcome data, which is substantially more than most value-added models. Researchers, who are external to the TLSI program faculty, controlled for covariates based on student and teacher characteristics such as status as a Limited English Proficient student classification, number of absences, and years of teacher experience. The researchers found significant improvements in reading and math scores of students in TLSI teachers' classrooms during the TLSI program and then further growth beyond program completion. Also, researchers found significant improvements in student attendance in TLSI teachers' classrooms, contributing to an interaction effect with the achievement data outcomes.

Study 4: External Evaluation Study

Within an i3 grant, SRI International is conducting an evaluation of the Florida Master Teacher Initiative (Golan, Wechsler, Park, & Chen, 2012). SRI's evaluation uses an experimental design with schools assigned to experimental groups where teachers may enroll in the TLSI program, and control groups where they may not. This study involves interviews, pre- and postsurveys, pre- and postclassroom observations, and examination of achievement outcomes. This study is still in process. Early outcomes reported by participants include increased collaboration among teachers, increased knowledge and use of new pedagogical strategies, increased reflection on practice, improved attitudes about teaching, as well as perceived positive impacts on students' academic performance and behavior.

CONCLUSION

In this article we have presented a case of clinical partnership at a distance—a graduate program reinvented for practicing teachers that places classroom practice at the center of learning. Although this concept is not a new one, the fact that we are building partnerships with districts up to 300 miles away through online platforms and a nested system of embedded supports is one that may not have been what Tom (1999) envisioned when he called for the reinvention of graduate programs. This program builds on current thinking about the nature of teacher learning and teacher leadership to create powerful learning contexts for teachers who want to improve their teaching practice, their schools, and their student outcomes. Although preservice teacher learning is critical to the profession, support for the learning and leadership of practicing teachers is even more critical to the profession. It has long been argued that teachers are socialized into schools as they currently exist, conserving existing practices (Cuban, 1984) and minimizing the potential for preservice teachers to impact schools. It may be that with appropriate scaffolding for reform, inservice teachers are better positioned to enact and even lead reform in schools. Teacher educators must begin to place the kind of emphasis on graduate programs for practicing educators that we have historically placed on preservice teacher education. We welcome collaboration with other like-minded teacher educators who can envision new approaches to graduate education for practicing educators that help them develop new knowledge and skills within their current contexts. Further, it is critically important that teacher educators study the impact of those programs with strong research designs. Only by studying these new designs will we understand whether these graduate programs serve teachers and schools as they address the most pressing problems in education.

AUTHOR BIOS

Alyson Adams, Ph.D., is a Clinical Associate Professor in the School of Teaching and Learning in the College of Education at the University of Florida. She is also the Chief Learning Officer for the Lastinger Center for Learning, an endowed center at UF.

Dorene D. Ross, Ed.D., is a Professor Emeritus in the School of Teaching and Learning at the University of Florida. Her research interests include effective teaching and management in poverty schools, and teacher learning within teacher education programs and in professional development programs.

REFERENCES

Adams, A., Ross, D. D., Swain, C., Dana, N. F., Leite, W., & Sandbach, R. (2013). Preparing teacher leaders in a job-embedded graduate program: Changes within and beyond classroom walls. *Teacher Education and Practice*, *26*, 581–597.

Cochran-Smith, M., & Lytle, S. (1999). Relationships of knowledge and practice: Teacher learning in communities. *Review of Research in Education*, *24*, 249–305.

Cochran-Smith, M., & Lytle, S. (2009). *Inquiry as stance: Practitioner research for the next generation*. New York, NY: Teachers College Press.

Cuban, L. (1984). *How teachers taught: Constancy and change in American classrooms: 1890–1980*. New York, NY: Longman.

Dana, N. F., & Yendol-Hoppey, D. (2009). *The reflective educator's guide to classroom research: Learning to teach and teaching to learn through practitioner inquiry*. Thousand Oaks, CA: Corwin.

Danielson, C. (2007). *Enhancing professional practice: a framework for teaching*. Alexandria, VA: Association for Supervision and Curriculum Development.

Desimone, L. (2009). Improving impact studies of teachers' professional development: Toward better conceptualizations and measures. *Educational Researcher*, *38*, 181–199.

Galluzzo, G. R., Isenberg, J. P., White, C. S., & Fox, R. K. (2012). *The master's degree in education as teacher professional development*. New York, NY: Rowman & Littlefield.

Golan, S., Wechsler, M., Park, C. J., & Chen, W. (2012). *Evaluation of the Florida master teacher initiative: Formative Report* (Report submitted by SRI International to the Miami-Dade County Public Schools).

Hammerness, K., Darling-Hammond, L., & Bransford, J. (2005). How teachers learn and develop. In L. Darling-Hammond & J. Bransford (Eds.), *Preparing teachers for a changing world: What teachers should learn and be able to do* (pp. 358–389). San Francisco, CA: Jossey-Bass.

Hochberg, E., & Desimone, L. (2010). Professional development in the accountability context: Building capacity to achieve standards. *Educational Psychologist*, *45*, 89–106.

Jimenez, F. A., & Leite, W. L. (2012). *Estimating program effects with the short interrupted time-series design and multilevel models: An application to the evaluation of a job-embedded master's degree program for teachers*. Paper presented at the Florida American Association of Educational Research, Gainesville, FL.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation.* Cambridge, UK: Cambridge University Press.

Louis, K. S., & Marks, H. M. (1998). Does professional learning community affect the classroom? Teachers' work and student experiences in restructuring schools. *American Journal of Education*, *106*, 532–575.

Marzano, R. J. (2007). *The art and science of teaching: A comprehensive framework for effective instruction.* Alexandria, VA: Association for Supervision and Curriculum Development.

Mezirow, J. (2000). Learning to think like an adult: Core concepts of transformational theory. In J. Mezirow & Associates (Eds.), *Learning as transformation: Critical perspectives on a theory in progress* (pp. 3–33). San Francisco, CA: Jossey-Bass.

Molseed, T. R. (2009). The power of continuity in graduate teacher education master's programs. *Educational Studies*, *35*, 575–587.

Muchmore, J. A., Marx, G. E., & Cromwell, R. A. (2002). Beyond a rite of passage: Initiating an alternative master's degree program for inservice teachers. *The Teacher Educator*, *38*, 16–33.

Muijs, D. & Harris, A. (2003). *Teacher leadership: A review of the research.* Nottingham, UK: National College for School Leadership.

National Council for Accreditation of Teacher Education. (2010, November). *Transforming teacher education through clinical practice: A national strategy to prepare effective teachers. Report of the Blue Ribbon Panel on Clinical Preparation and Partnerships for Improved Student Learning*. Washington, DC: Author. Retrieved from http://www.ncate.org/LinkClick.aspx?fileticket=zzeiB1OoqPk%3d&tabid=715

Pianta, R. C., La Paro, K. M., & Hamre, B. K. (2008). *Classroom assessment scoring system (CLASS) manual. Pre-K.* Baltimore, MD: Brookes.

Powell, R., Cantrell, S., Gallardo, V., Cox, A., Powers, S., Rightmyer, E. C., & Wheeler, T. (2011). *Culturally responsive instruction observation protocol* (CRIOP) [Observation protocol]. Lexington, KY: The Collaborative Center for Literacy Development and The Center for Culturally Relevant Pedagogy.

Putnam, R. T., & Borko, H. (2000). What do new views of knowledge and thinking have to say about research on teacher learning? *Educational Researcher*, *29*, 4–15.

Ross, D. D., Adams, A., Bondy, E., Dana, N., Dodman, S., & Swain, C. (2011). Preparing teacher leaders: Perceptions of the impact of a cohort-based, job embedded, blended teacher leadership program. *Teaching and Teacher Education*, *27*, 1213–1222. doi:10.1016/j.tate.2011.06.005

Taylor, M., Goeke, J., Klein, E., ONore, C., & Geist, K. (2011). Changing leadership: Teachers lead the way for schools that learn. *Teaching and Teacher Education*, *27*, 920–929.

Teacher Leadership Exploratory Consortium. (2012). *Teacher leader model standards.* Retrieved from http://www.teacherleaderstandards.org/index.php

Tom, A. R. (1999). Reinventing master's degree study for experienced teachers. *Journal of Teacher Education*, *50*, 245–254.

Vescio, V., Ross, D., & Adams, A. (2008). A review of research on the impact of professional learning communities on teaching practice and student learning. *Teaching and Teacher Education*, *24*, 80–91.

York-Barr, J. & Duke, K. (2004). What do we know about teacher leadership? Findings from two decades of scholarship. *Review of Education Research*, *74*, 255–316.

Zeichner, K. M., & Conklin, H. G. (2008). Teacher education programs as sites for teacher preparation. In M. Cochran-Smith, S. Feiman-Nemser, D. J. McIntyre, & K. E. Demers (Eds.), *Handbook of research on teacher education: Enduring questions in changing contexts* (3rd ed., pp. 269–289). New York, NY: Routledge.

Zeichner, K. M., & Liston, D. P. (1996). *Reflective teaching: An introduction.* Mahwah, NJ: Erlbaum.

APPENDIX

Teacher Leadership for School Improvement (TLSI) Course Design Principles

TLSI program faculty identified the following design principles based on our assumptions and beliefs about professional development and adult learning. They should provide guidance as you prepare your course for inclusion within the TLSI program.

Course Design Principles and TLSI information	
TLSI goal areas	▪ The TLSI program is designed to help each TLSI student develop as a o Teacher Leader or Educational Advocate o Teacher Researcher o Master Teacher (content and pedagogical mastery)
Integration of 1-2 assignments within the course that could serve as portfolio entries	▪ TLSI students create portfolios over the course of the program to provide evidence for their professional growth in each goal area above. • Each course in the TLSI core should address one or more goal area. ▪ Specialization courses typically address goal 3 above: content and pedagogy related to development as a Master Teacher. ▪ Portfolio entries should focus on application of new knowledge, not simply acquisition of new learning or theory. We encourage assignments where the TSLI students are looking not only at their own practice in terms of what they are doing/saying but also what is happening with students (what they are doing/saying AND the evidence they provide of their new knowledge) ▪ Portfolio entries are ideally implemented within the course itself, but could be implemented over time after the course. However, to be included in the portfolio the artifact MUST have evidence of implementation. Plans for action are not acceptable unless they are implemented and reflected upon.
Learning is situated within teachers' context	• All TLSI students are full-time practicing educators • Course content should attempt to link to teachers' context, questions and issues ▪ Begin by helping learners activate prior knowledge and experience ▪ Focus on developing practical tools – teachers should be able to immediately implement the concepts they are learning in each course
Explicit focus on inquiry	▪ Collection and analysis of evidence of impact on students / families (inquiry/equity focus) o Planning based on data and new learning (Learn / Explore) o Delivery or Implementation (Try / Apply) o Follow-up (Collect Evidence) o Evaluation (Analyze / Reflect)
Use of structured discussions around what teachers are learning.	▪ Multiple opportunities for teachers to discuss new learning. •Provide opportunities to "talk back" or question what they are learning in the context of their prior experiences ▪ Use of discussion protocols when possible and appropriate. You might need to provide instruction and scaffolding when using protocols as we cannot assume all TLSI students have been trained in the use of protocols.
Explicit focus on development of practical tools	▪ Help readers connect theory to practice by thinking about their contexts and their professional roles (teacher, coach, principal) and how they can use what they are learning immediately ▪ Provide explicit examples (videos, demos, cases) when possible ▪ Provide web-based resources o Links to websites, links to articles, links to books

(Continued on the next page)

(continued)

Extended interactions / connections between facilitator and participants	▪ Multiple points across time for development, analysis, interaction ▪ Variety of online tools and pedagogy ○ discussion forums, blogs, wikis ○ Elluminate (video conference) sessions ○ Google docs for faculty and TLSI students to collaboratively work on documents ▪ Responsive to student questions and emails within reasonable boundaries that are well-communicated ▪ When possible, structure course due dates to accommodate working professionals (preferred due date of Sunday at midnight) ▪ Working professionals also like to plan their upcoming time commitments, so opening all modules in advance helps them plan ahead. This does not mean you need to allow them to work ahead as that often limits interaction.
Lastinger/TLSI supports to draw upon	▪ Not all students are in Lastinger partner districts. However, 90% are, so you should be aware of district supports that Lastinger provides. ▪ The Professor-in-Residence (UF faculty) in each Lastinger partner district can be a great connection to individual students who are struggling or need immediate communication. These faculty teach the CORE TLSI courses, advise students in their district, and act as a liaison to campus-based faculty. • Lastinger school improvement initiatives in place will vary by district but can include ○ Teacher inquiry as professional development ○ Formative data tools to provide schools feedback on the nature of instructional practices and school collaborative culture ○ Ongoing principal professional development ○ School-based professional learning communities ○ Facilitative leadership training for teacher leaders ○ Summer institutes ○ Content-based professional development for all school staff

PEABODY JOURNAL OF EDUCATION, 89: 547–561, 2014
Copyright © Taylor & Francis Group, LLC
ISSN: 0161-956X print / 1532-7930 online
DOI: 10.1080/0161956X.2014.939009

Routledge
Taylor & Francis Group

Strengthening Clinical Preparation: The Holy Grail of Teacher Education

Linda Darling-Hammond
Stanford University School of Education

Efforts to improve teacher education have recently focused in on the importance of well-supervised clinical practice as a critical element of effective preparation. This article outlines the challenges to creating productive clinical experiences for prospective teachers, and identifies strategies that have been found successful in confronting these challenges. These include the development of professional development school relationships that strengthen practice in partner schools and the use of teacher performance assessments that focus attention on pulling together practical skills and providing feedback to candidates and programs.

The question of how to strengthen teacher education is increasingly at the forefront of U.S. education policymaking, as the demands on teachers to teach ever more challenging curriculum to ever more diverse learners continue to increase exponentially. Yet the means for doing this are largely invisible to many. As the National Academy of Education Committee on Teacher Education noted at the start of its report:

> To a music lover watching a concert from the audience, it would be easy to believe that a conductor has one of the easiest jobs in the world. There he stands, waving his arms in time with the music, and the orchestra produces glorious sounds, to all appearances quite spontaneously. Hidden from the audience—especially from the musical novice—are the conductor's abilities to read and interpret all of the parts at once, to play several instruments and understand the capacities of many more, to organize and coordinate the disparate parts, to motivate and communicate with all of the orchestra members. In the same way that conducting looks like hand-waving to the uninitiated, teaching looks simple from the perspective of students who see a person talking and listening, handing out papers, and giving assignments. Invisible in both of these performances are the many kinds of knowledge, unseen plans, and backstage moves—the skunkworks, if you will, that allow a teacher to purposefully move a group of students from one set of understandings and skills to quite another over the space of many months. (Darling-Hammond & Bransford, 2005, p. 1)

A good part of the magic of teaching and of teacher education is how teachers come to integrate theory and practice in a way that allows them to become expert in making and enacting decisions to meet the very different needs of the children they serve. The "secret sauce" in teacher education appears not to be the structures adopted by programs (e.g., 4 year, 5 year, 5th year, or other). There

---

Correspondence should be sent to Linda Darling-Hammond, Stanford University School of Education, Stanford, CA 94305. E-mail: lindadh@stanford.edu

seem to be more and less successful programs within each of these structural alternatives. For example, a study of seven teacher education programs that graduate extraordinarily well-prepared candidates—a judged by observations of their practice, administrators who hire them, and their own sense of preparedness and self-efficacy as teachers—found successful exemplars among 4-year, 5-year, and 1- to 2-year graduate-level programs, which suggests that program structure is not the determinative factor in predicting program success (Darling-Hammond, 2006b).

However, there is evidence that teachers learn different things from different programs and feel differentially well prepared for specific aspects of teaching (Darling-Hammond, Chung, & Frelow, 2002; Denton & Lacina, 1984), and certain program features appear to make a difference in candidates' preparation.

PROGRAM FEATURES THAT APPEAR TO MATTER

The seven-program study just mentioned included public and private institutions offering undergraduate and graduate programs that ranged in size from dozens to hundreds of candidates, but all produced graduates who were extraordinarily well prepared from their first days in the classroom.[1] The research team found that, despite outward differences, the programs had common features, including

- a common, clear vision of good teaching that permeates all coursework and clinical experiences, creating a coherent set of learning experiences;
- well-defined standards of professional practice and performance that are used to guide and evaluate coursework and clinical work;
- a strong, core curriculum, taught in the context of practice, grounded in knowledge of child and adolescent development and learning, an understanding of social and cultural contexts, curriculum, assessment, and subject matter pedagogy;
- extended clinical experiences—at least 30 weeks of supervised practicum and student teaching opportunities in each program—that are carefully chosen to support the ideas presented in simultaneous, closely interwoven coursework;
- extensive use of case methods, teacher research, performance assessments, and portfolio evaluation that apply learning to real problems of practice;
- explicit strategies to help students confront their own deep-seated beliefs and assumptions about learning and students and to learn about the experiences of people different from themselves; and
- strong relationships, common knowledge, and shared beliefs among school- and university-based faculty jointly engaged in transforming teaching, schooling, and teacher education. (Darling-Hammond, 2006b)

These features confront many of the core dilemmas of teacher education: the strong influence of the "apprenticeship of observation" candidates bring with them from their years as students in elementary and secondary schools, the presumed divide between theory and practice, the limited personal and cultural perspectives all individuals bring to the task of teaching, and the difficult process of helping people learn to enact their intentions in complex settings. They help produce novice teachers who are able, from their first days in the classroom, to practice like many seasoned veterans, productively organizing classrooms that teach challenging content to very diverse learners with levels of skill many teachers never attain.

---

[1] The seven institutions studied are Alverno College in Milwaukee, WI; Bank Street College in New York City; Trinity College in San Antonio, TX; University of California at Berkeley; University of Virginia in Charlottesville; University of Southern Maine; and Wheelock College in Boston, MA.

These findings are similar to those of a recent New York City study that evaluated the contributions to value-added student achievement in English language arts and mathematics of beginning elementary teachers from different teacher education programs. The researchers examined the features of the most effective programs, by this standard, and found that, in addition to strong faculty, they included strong practical elements:

- More coursework in content areas (e.g. math and reading) and in content-specific methods of teaching.
- A focus on helping candidates learn specific practices that they apply in classrooms where they are practicing teaching alongside their coursework.
- Carefully selected student teaching experiences, well-matched to the contexts in which candidates will later teach.
- Opportunities to study the local district curriculum.
- A capstone project—typically a portfolio of work done in classrooms with students.

Other studies reinforce these findings. For example, many studies suggest that candidates who have more opportunity to *study and apply subject-specific teaching methods* are more effective (Begle, 1979; Druva & Anderson, 1983; Ferguson & Womack, 1993; Lustick & Sykes, 2006; Monk, 1994; Monk & King, 1994). Furthermore, teachers who have participated in targeted learning opportunities on effective teaching practices in specific content areas, with immediate opportunities to apply these practices, have produced student achievement gains that were significantly greater than those of comparison group teachers (Angrist & Lavy, 2001; Ebmeier & Good, 1979; Lawrenz & McCreath, 1988).

AREAS OF FOCUS FOR MORE POWERFUL PREPARATION PROGRAMS

Such powerful teacher education, I believe, rests on certain critically important pedagogical cornerstones that have been difficult to attain in many programs since teacher education moved from normal schools into universities in the 1950s. I highlight three of these here, because I think they are essential to achieving radically different outcomes from preparation programs.

Coherence and Integration

The first is a tight coherence and integration among courses and between coursework and clinical work in schools that challenges traditional program organizations, staffing, and modes of operation. The extremely strong coherence extraordinary programs have achieved creates an almost seamless experience of learning to teach. In contrast to the many critiques that have highlighted the structural and conceptual fragmentation of traditional undergraduate teacher education programs (see, e.g., Goodlad, Soder, & Sirotnik, 1990; Howey & Zimpher, 1989; Zeichner & Gore, 1990), coursework in highly successful programs is carefully sequenced, based on a strong theory of learning to teach; courses are designed to intersect with each other and are aggregated into a well-understood landscape of learning; and they are tightly interwoven with the advisement process and students' work in schools.

Subject matter learning is brought together with content pedagogy through courses that treat them together; program sequences also create cross-course links. Faculty plan together and syllabi are shared across university divisions as well as within departments. Virtually all of the closely interrelated courses involve applications in classrooms where observations or student teaching occur. These classrooms, in turn, are selected because they model the kind of practice that is discussed in courses and advisement. In some particularly powerful programs, faculty who teach courses also supervise and advise teacher candidates, and sometimes even teach children and teachers in placement schools, bringing together these disparate program elements through an integration of roles.

In such intensely coherent programs, core ideas are reiterated across courses and the theoretical frameworks animating courses and assignments are consistent across the program. These frameworks "explicate, justify, and build consensus around such fundamental conceptions as the *role* of the teacher, the *nature* of teaching and learning, and the *mission* of the school in this democracy" enabling "*shared* faculty leadership by underscoring collective roles as well as individual course responsibilities" (Howey & Zimpher, 1989, p. 242).

Programs that are largely a collection of unrelated courses without a common conception of teaching and learning have been found to be relatively feeble change agents for affecting practice among new teachers (Zeichner & Gore, 1990). Cognitive science affirms that people learn more effectively when ideas are reinforced and connected both in theory and in practice. Although this seems obvious, creating coherence has been difficult in teacher education because of departmental divides, individualistic norms, and the hiring of part-time adjunct instructors in some institutions that have used teacher education as a "cash cow" rather than an investment in our nation's future. Fortunately, a number of studies of teacher education reform have documented how programs have overcome the centrifugal forces that leave candidates on their own to make sense of disparate, unconnected experiences (Howey & Zimpher, 1989; Patterson, Michelli, & Pacheco, 1999; Tatto, 1996; Wideen, Mayer-Smith, & Moon, 1998).

Explicit Links Between Theory and Practice

The second critically important feature that requires a wrenching change from traditional models of teacher education is the importance of extensive and intensely supervised clinical work—tightly integrated with coursework—that allows candidates to learn from expert practice in schools that serve diverse students. All of the adjectives in the previous sentence matter: "Extensive" clinical work, "intensive" supervision, "expert" modeling of practice, and "diverse" students are all critical to allowing candidates to learn to practice *in* practice with students who call for serious teaching skills (Ball & Cohen, 1999), and securing these features is what will take radical overhaul of the status quo. Furthermore, to be most powerful, this work needs to incorporate newly emerging pedagogies—such as close analyses of learning and teaching, case methods, performance assessments, and action research—that link theory and practice in ways that theorize practice and make formal learning practical.

One of the perennial dilemmas of teacher education is how to integrate theoretically based knowledge that has traditionally been taught in university classrooms with the experience-based knowledge that has traditionally been located in the practice of teachers and the realities of classrooms and schools. Traditional versions of teacher education have often had students taking batches of front-loaded coursework in isolation from practice and then adding a short dollop of student teaching to the end of the program—often in classrooms that did not model the practices that had previously been described in abstraction. By contrast, the most powerful programs require students to spend extensive time in the field, examining and applying the concepts and strategies they are simultaneously learning about in their courses alongside teachers who can show them how to teach in ways that are responsive to learners.

Such programs typically require at least a full academic year of student teaching under the direct supervision of one or more teachers who model expert practice with students who have a wide range of learning needs, with the candidate gradually assuming more independent responsibility for teaching. This allows prospective teachers to grow "roots" on their practice, which is especially important if they are going to learn to teach in learner-centered ways that require diagnosis, adaptations to learners' needs, intensive assessment and planning, and a complex repertoire of practices, judiciously applied.

Many teacher educators have argued that novices who have experience in classrooms are more prepared to make sense of the ideas that are addressed in their academic work and that student teachers see and understand both theory and practice differently if they are taking coursework concurrently with fieldwork. A growing body of research confirms this belief, finding that teachers-in-training who participate in fieldwork alongside coursework are better able to understand theory, to apply concepts they are learning in their coursework, and to support student learning (Denton, 1982; Henry, 1983; Koerner, Rust, & Baumgartner, 2002; Ross, Hughes, & Hill, 1981; Sunal, 1980). Other work suggests that candidates' learning is influenced by the care with which placements are chosen, the quality of practice that is modeled, and the quality and frequency of mentoring (Feiman-Nemser & Buchmann, 1985; Knowles & Hoefler, 1989; LaBoskey & Richert, 2002; Rodriguez & Sjostrom, 1995).

In addition, the quality and intensity of supervision, and the evaluation tools used to guide supervision, are factors that may be potentially important elements of teacher learning. The match between placements in which candidates learn to teach and their eventual teaching assignments—in terms of the type of students, grade level, and subject matter—appear to be associated with stronger teaching in the early years (Koerner et al., 2002). Some research also suggests that the duration of student teaching experiences may influence teachers' later teaching practice and self-confidence (Chin & Russell, 1995; Denton & Lacina, 1984; Denton, Morris, & Tooke, 1982; Denton & Smith, 1983; Denton & Tooke, 1981; Koerner et al., 2002; LaBoskey & Richert, 2002; Orland-Barak, 2002; Sumara & Luce-Kaplar, 1996).

It is not just the availability of classroom experience that enables teachers to apply what they are learning, however. Recent studies of learning to teach suggest that immersing teachers in the materials of practice and working on particular concepts using these materials can be particularly powerful for teachers' learning. Analyzing samples of student work, teachers' plans and assignments, videotapes of teachers and students in action, and cases of teaching and learning can help teachers draw connections between generalized principles and specific instances of teaching and learning (Ball & Cohen, 1999; Hammerness, Darling-Hammond, & Shulman, 2002; Lampert & Ball, 1998).

It is worth noting that many professions, including law, medicine, psychology, and business, help candidates bridge the gap between theory and practice—and develop skills of reflection and close analysis—by engaging them in the reading and writing of cases. Many highly successful teacher education programs require candidates to develop case studies on students, on aspects of schools and teaching, and on families or communities by observing, interviewing, examining student work, and analyzing data they have collected. Proponents argue that cases support both systematic learning from particular contexts as well as from more generalized theory about teaching and learning. Shulman (1996) suggested that cases are powerful tools for professional learning because they require professionals in training to

> move up and down, back and forth, between the memorable particularities of cases and the powerful generalizations and simplifications of principles and theories. Principles are powerful but cases are memorable. Only in the continued interaction between principles and cases can practitioners and their mentors avoid the inherent limitations of theory-without-practice or the equally serious restrictions of vivid practice without the mirror of principle. (p. 201)

These benefits of connecting profession-wide knowledge to unique contexts can also be gained by the skillful use of tools like portfolios; teachers' classroom inquiries and research; and analyses of specific classrooms, teachers, or teaching situations when teacher educators provide thoughtful readings, guidance, and feedback.

Although it is helpful to experience classrooms and analyze the materials and practices of teaching, it is quite another thing to put ideals into action. Often, the clinical side of teacher education has been fairly haphazard, depending on the idiosyncracies of loosely selected placements with little guidance about what happens in them and little connection to university work. And university work has often been "too theoretical"—meaning abstract and general—in ways that leave teachers bereft of specific *tools* to use in the classroom. The theoretically grounded tools teachers need are many, ranging from knowledge of curriculum materials and assessment strategies to techniques for organizing group work and planning student inquiries—and teachers need opportunities to *practice* with these tools systematically.

Powerful teacher education programs have a clinical curriculum as well as a didactic curriculum. They teach candidates to turn analysis into action by applying what they are learning in curriculum plans, teaching applications, and other performance assessments that are organized around professional teaching standards. These attempts are especially educative when they are followed by systematic reflection on student learning in relation to teaching and accompanied by feedback, with opportunities to retry and continue to improve. Furthermore, recent research suggests that, to be most productive, these opportunities for analysis, application, and reflection should derive from and connect to both the subject matter and the students who are taught (Ball & Bass, 2000; Grossman & Stodolsky, 1995; Shulman, 1987). In this way, prospective teachers learn the fine-grained stuff of practice in connection to the practical theories that will allow them to adapt their practice in a well-grounded fashion, innovating and improvising to meet the specific classroom contexts they later encounter.

New Relationships With Schools

Finally, these kinds of strategies for connecting theory and practice cannot succeed without a major overhaul of the relationships between universities and schools that ultimately produce changes in the content of schooling as well as teacher training. It is impossible to teach people how to teach powerfully by asking them to imagine what they have never seen or to suggest they "do the opposite" of what they have observed in the classroom. No amount of coursework can, by itself, counteract the powerful experiential lessons that shape what teachers actually do. It is impractical to expect to prepare teachers for schools as they should be if teachers are constrained to learn in settings that typify the problems of schools as they have been—where isolated teachers provide examples of idiosyncratic, usually atheoretical practice that rarely exhibits a diagnostic, assessment-oriented approach and infrequently offers access to carefully selected strategies designed to teach a wide range of learners well.

These settings simply do not exist in large numbers—and where individual teachers have created classroom oases, there have been few long-lasting reforms to leverage transformations in whole schools. Some very effective partnerships, however, have helped to create school environments for teaching and teacher training—through professional development schools (PDS), lab schools, and school reform networks—that are such strong models of practice and collaboration that the environment itself serves as a learning experience for teachers (Darling-Hammond, 2005; Trachtman, 1996). In such schools, teachers are immersed in strong and widely shared cultural norms and practices and can leverage them for greater effect through professional studies offering research, theory, and information about other practices and models. Such schools also support advances in knowledge by serving as sites where practice-based and practice-sensitive research can be carried out collaboratively by teachers, teacher educators, and researchers.

In highly developed professional development school models, curriculum reforms and other improvement initiatives are supported by the school and often the district; school teams involving both university and school educators work on such tasks as curriculum development, school reform, and action research; university faculty are typically involved in teaching courses and organizing professional development at the school site and may also be involved in teaching children; school-based faculty often teach in the teacher education program. Most classrooms are sites for practica and student teaching placements, and cooperating teachers are trained to become teacher educators, often holding meetings regularly to develop their mentoring skills. Candidates learn in all parts of the school, not just individual classrooms; they receive more frequent and sustained supervision and feedback, and participate in more collective planning and decision making among teachers at the school (Abdal-Haqq, 1998, pp. 13–14; Darling-Hammond, 2005; Trachtman, 1996).

Some universities have sought to create PDS relationships in schools that are working explicitly on an equity agenda, either in new schools designed to provide more equitable access to high-quality curriculum for diverse learners or in schools where faculty are actively confronting issues of tracking, poor teaching, inadequate or fragmented curriculum, and unresponsive systems (see, e.g., Darling-Hammond, 2005; Guadarrama, Ramsey, & Nath, 2002). In these schools, student teachers or interns are encouraged to participate in all aspects of school functioning, ranging from special education and support services for students to parent meetings, home visits, and community outreach to faculty discussions and projects aimed at ongoing improvement in students' opportunities to learn. This kind of participation helps prospective teachers understand the broader institutional context for teaching and learning and begin to develop the skills needed for effective participation in collegial work around school improvement throughout their careers.

Developing sites where state-of-the-art practice is the norm is a critical element of strong teacher education, and it has been one of the most difficult. Quite often if novices are to see and emulate high-quality practice, especially in schools serving the neediest students, it is necessary not only to seek out individual cooperating teachers but to develop the quality of the schools so that prospective teachers can learn productively and to create settings where advances in knowledge and practice can continue to occur. Seeking diversity by placing candidates in schools serving low-income students or students of color that suffer from the typical shortcomings many such schools face can actually be counterproductive. As Gallego (2001) noted,

> Though teacher education students may be placed in schools with large, culturally diverse student populations, many of these schools . . . do not provide the kind of contact with communities needed to overcome negative attitudes toward culturally different students and their families and communities (Zeichner, 1992). Indeed, without connections between the classroom, school, and local communities, classroom field experiences may work to strengthen pre-service teachers' stereotypes of children, rather than stimulate their examination (Cochran-Smith, 1995; Haberman & Post, 1992), and ultimately compromise teachers' effectiveness in the classroom. (Zeichner, 1996). (p. 314)

Thus, working to create professional development schools that construct state-of-the art practice in communities where students are typically underserved by schools helps transform the eventual teaching pool for such schools and students. In this way, PDSs develop *school practice* as well as the *individual practice* of new teacher candidates. Such PDSs simultaneously restructure school programs and teacher education programs, redefining teaching and learning for all members of the profession and the school community.

Although not all of the more than 1000 school partnerships (Darling-Hammond & Bransford, 2005) created in the name of PDS work have been successful, there is growing evidence of the power of this approach. Studies polling employers and supervisors showed graduates of highly developed PDSs were viewed as much better prepared than other new teachers (Hayes & Weatherill, 1996; Mantle-Bromley, 2002). Veteran teachers working in highly developed PDSs have reported changes in their own practice and improvements at the classroom and school levels as a result of the professional development, action research, and mentoring that are part of the PDS (Crow, Stokes, Kauchak, Hobbs, & Bullough, 1996; Jett-Simpson, Pugach, & Whipp, 1992; Trachtman, 1996).

Comparison group studies have found that PDS-prepared teachers are rated stronger in various areas of teaching, ranging from classroom management and uses of technology to content area skills (Gill & Hove, 1999; Neubert & Binko, 1998; Shroyer, Wright, & Ramey-Gassert, 1996). A small set of studies has documented gains in student performance and achievement tied directly to curriculum and teaching interventions resulting from the professional development and curriculum work professional development schools have undertaken with their university partners (e.g., Fischetti & Larson, 2002; Frey, 2002; Glaeser, Karge, Smith, & Weatherill, 2002; Houston et al., 1995; Judge, Carrideo, & Johnson, 1995; Wiseman & Cooner, 1996).

Although research has also demonstrated how difficult these partnerships are to enact, many schools of education are moving toward preparing all of their prospective teachers in such settings, both because they can more systematically prepare prospective teachers to learn to teach in professional learning communities and because such work is a key to changing schools so that they become more productive environments for the learning of all students and teachers.

POLICY SUPPORTS FOR STRENGTHENING PREPARATION

Policies that would dramatically improve teacher quality need to include effective incentives for recruiting, retaining, and distributing teachers to the places where they are needed (for examples, see Darling-Hammond & Sykes, 2003) as well as professional policies governing accreditation, licensure, and advanced certification that encourage schools of education to adopt the kinds of connected coursework and clinical experiences that enhance teachers' capacities and effectiveness.

To focus attention on the critical role of clinical preparation, among the most promising policies are supports for teacher evaluation strategies—such as standards-based teacher performance assessments like those of the National Board for Professional Teaching Standards, the Performance Assessment for California Teachers, and the recently developed edTPA—that have been found not only to measure features of teaching associated with effectiveness (see, e.g., Bond, Smith, Baker, & Hattie, 2000; Cavaluzzo, 2004; Goldhaber & Anthony, 2007; Vandevoort, Amrein-Beardsley, & Berliner, 2004) but actually to help develop classroom effectiveness at the same time. Particularly useful are those approaches that develop both greater teaching skill and understanding for the participants and for those involved in mentoring and assessing these performances. These approaches may be particularly valuable targets for policy investments, as they may provide an engine for developing teaching quality across the profession—by contributing to program improvement and to measures of how teachers contribute to student learning.

The assessments require teachers to document their plans and teaching for a unit of instruction, videotape and analyze lessons, and collect and evaluate evidence of student learning. Like the National Board assessments, beginning teachers' ratings on the Connecticut BEST assessment have been found to significantly predict their students' value-added achievement on the state reading tests (Wilson, Hallam, Moss, & Pecheone, 2014).

Meanwhile, in California, the state legislature requires all traditional and alternative preparation programs to evaluate candidates using a teacher performance assessment, which is used both to determine licensing and—when scores are aggregated—to evaluate programs for accreditation purposes. The Performance Assessment for California Teachers (PACT) was developed by 12 public and private universities in 2002 when the state legislature required that all candidates be licensed through a performance assessment. It asks candidates to plan a unit of instruction, adapt the plans for English learners and students with disabilities, and track 3 to 5 days of instruction. Candidates discuss how and why the plans are revised as teaching unfolds, submit a continuous video clip of a teaching segment, and collect and analyze evidence of student learning. Candidates also describe and show how they develop students' language proficiency and academic language in the discipline.

Together these tasks, conducted over 1 week of instruction, provide vivid evidence of what beginning teachers can *do* in enacting the fundamental elements of teaching. The PACT is scored by faculty members, instructors, supervisors, and cooperating teachers using standardized rubrics in moderated sessions following training, with an audit procedure to calibrate standards.

Faculties use the PACT results to revise their curriculum. Like the National Board assessments, these promise to have learning effects that may affect the system more broadly, through the learning that occurs for assessors as well as for candidates (Darling-Hammond, 2006a). For example, participants report the following:

> For me the most valuable thing was the sequencing of the lessons, teaching the lesson, and evaluating what the kids were getting, what the kids weren't getting, and having that be reflected in my next lesson . . . the 'teach-assess-teach-assess-teach-assess' process. And so you're constantly changing—you may have a plan or a framework that you have together, but knowing that that's flexible and that it has to be flexible, based on what the children learn that day. (Prospective teacher)

> This [scoring] experience . . . has forced me to revisit the question of what really *matters* in the assessment of teachers, which—in turn—means revisiting the question of what really *matters* in the *preparation* of teachers. (Teacher education faculty member)

> [The scoring process] forces you to be clear about "good teaching;" what it looks like, sounds like. It enables you to look at your own practice critically, with new eyes. (Cooperating teacher)

> As an induction program coordinator, I have a much clearer picture of what credential holders will bring to us and of what they'll be required to do. We can build on this. (Induction program coordinator)

More than 30 universities and alternative programs now use the assessment, which has been shown to be reliable, valid, and a strong lever for improving both teacher competence and program quality (Pecheone & Chung, 2006). Like the Connecticut BEST assessment, validity studies of PACT have also found that teachers' scores on the assessment are positively associated with their value-added effectiveness when they later become full-time teachers (Darling-Hammond, Newton, & Wei, 2012; Newton, 2010). These performance assessments also help beginning teachers improve their practice in ways that continue after the assessment experience has ended (Chung, 2008; Pecheone & Stansbury, 1996).

Based on this work, more than 20 states recently joined together as a Teacher Performance Assessment Consortium under the auspices of the American Association of Colleges of Teacher Education to create a common initial licensing assessment that can be used nationwide to make preparation and licensing more performance based. These states, along with more than 1,000 teachers and teacher educators nationwide in a process orchestrated by practitioners and researchers at Stanford University, have developed the edTPA. The nationally available edTPA was field tested in 2012–13 with more than 12,000 candidates in 26 states and 160 institutions of higher education and is under consideration or has been adopted for licensure or program approval in many of these states.

Like the National Board and the PACT assessments before it, candidates and teacher educators report that this process strengthens their practice.[2] In Ohio, when 32 institutions piloted edTPA and studied the outcomes, 96% of teacher candidates report feeling positively about the experience, pointing especially to how it made them more self-aware and focused them on student learning (Hanby, 2011). As one observed,

> [It helped me] because I was analyzing student learning and developing lessons that met the needs of each individual student. It helped me develop lessons that were within the students' ability level, but pushed them to think more in depth.

---

[2] For more information, see http://edtpa.aacte.org/resources

Teacher educators felt they learned as well. As one put it,

> It forced the teacher candidates to examine what they were doing as beginning teachers. It also forced me to look at the materials that I was including in my seminar and the relevance of these materials to my students.

Similar conversations occurred across the eight Tennessee universities piloting the assessment. Marcy Singer Gabella, teacher education director at Vanderbilt University, describes how instructors revised coursework and field assignments to strengthen learning opportunities when the assessment revealed that candidates had difficulty analyzing student work and giving students usable feedback. Vanderbilt graduate Nicole Renner remarked that the TPA changed her teaching by refocusing her from herself—where most beginners start—to the students. Renner (2012) noted,

> Even though the TPA is used for summative assessment, it is also formative, and the main lesson of the TPA is exactly what new and pre-service teachers need to learn: 'It's about the students, dummy!' The TPA process shape(s) the candidate's field experience (so that the) focus (is) entirely on students. Yes, we videotape lessons, and we refer to that as 'videotaping **ourselves**,' but what we are really trying to capture on that tape is our ability to foster a student-centered learning experience.

Similarly, Stephanie Wittenbrink (2013), a student teacher studying special education in Washington state, described the "radical perspective shift" (p. 1) she experienced as part of the first class of edTPA candidates, noting, "I was better prepared to teach because of the steps required by edTPA." She argued, "All student teachers should complete such a classroom- and performance-based assessment. The field needs it and students deserve it" (p. 1).

CONCLUSION

Strengthening clinical practice in teacher preparation is clearly one of the most important strategies for improving the competence of new teachers and the capacity of the teaching force as a whole. As teacher educators consider how to accomplish this now-consensual goal, it will be important to take up, simultaneously, the other factors that will determine the success of this work. At minimum, these include creating a coherent vision and curriculum within and across the coursework and clinical components of the program, developing tasks and analytic opportunities that connect theory and practice, establishing school partnerships that are designed to support exemplary practice and pedagogical learning for teaching diverse learners, and incorporating strategies for assessing beginners' capacity to practice—and informing ongoing program improvement—through sophisticated and educative assessments of what candidates can actually *do* when they are ready to enter the profession.

AUTHOR BIO

Linda Darling-Hammond is Charles E. Ducommun Professor of Education at Stanford University and founder of the Stanford Center for Opportunity Policy in Education (SCOPE) and the School Redesign Network. She has served as faculty sponsor for the Stanford Teacher Education Program.

She is a former president of the American Educational Research Association and member of the National Academy of Education. Among her many books are *Professional Development Schools: Schools for Developing a Profession, Preparing Teachers for a Changing World: What Teachers Should Learn and be Able to Do* (with John Bransford, winner of the Pomeroy Award), and *Teaching as the Learning Profession* (with Gary Sykes, winner of the National Staff Development Council Outstanding Book Award).

REFERENCES

Abdal-Haqq, I. (1998). *Professional development schools: Weighing the evidence*. Thousand Oaks, CA: Corwin.

Angrist, J. D., & Lavy, V. (2001). Does teacher training affect pupil learning? Evidence from matched comparisons in Jerusalem Public Schools. *Journal of Labor Economics, 19*, 343–369.

Ball, D. L., & Bass, H. (2000). Interweaving content and pedagogy in teaching and learning to teach: knowing and using mathematics. In J. Boaler (Ed.), *Multiple perspectives on the teaching and learning of mathematics* (pp. 83–104). Westport, CT: Ablex.

Ball, D. L., & Cohen, D. C. (1999). Developing practice, developing practitioners: Toward a practice-based theory of professional education. In L. Darling-Hammond & G. Sykes (Eds.), *Teaching as the learning profession: Handbook of policy and practice* (pp. 3–32). San Francisco, CA: Jossey Bass.

Begle, E. G. (1979). Critical variables in mathematics education: Findings from a survey of the empirical literature. Washington, DC: Mathematical Association of America.

Bond, L., Smith, T., Baker, W., & Hattie, J. (2000). *The certification system of the National Board for Professional Teaching Standards: A construct and consequential validity study*. Greensboro, NC: Center for Educational Research and Evaluation.

Cavaluzzo, L. (2004). *Is National Board Certification an effective signal of teacher quality? (National Science Foundation No. REC-0107014)*. Alexandria, VA: The CNA Corporation.

Chin, P., & Russell, T. (1995, May). Structure and coherence in a teacher education program: addressing the tension between systematics and the educative agenda. Paper presented at the annual meeting of the Canadian Society for the Study of Education, Montreal, Quebec, Canada.

Chung, R. R. (2008). Beyond assessment: Performance assessments in teacher education. *Teacher Education Quarterly, 35*, 7–28.

Cochran-Smith, M. (1995). Color blindness and basket making are not the answers: Confronting the dilemmas of race, culture and language diversity in teacher education. *American Educational Research Journal, 32*, 493–522.

Crow, N., Stokes, D., Kauchak, D., Hobbs, S., & Bullough, R. V., Jr. (1996, April). Masters cooperative program: An alternative model of teacher development in PDS sites. Paper presented at the annual meeting of the American Educational Research Association, New York, NY.

Darling-Hammond, L. (Ed.). (2005). *Professional development schools: Schools for developing a profession (2nd ed.)*. New York, NY: Teachers College Press.

Darling-Hammond, L. (2006a). Constructing twenty-first century teacher education. *Journal of Teacher Education, 57*, 300–314.

Darling-Hammond, L. (2006b). *Powerful teacher education: Lessons from exemplary programs*. San Francisco, CA: Jossey-Bass.

Darling-Hammond, L., & Bransford, J. (2005). *Preparing teachers for a changing world: What teachers should learn and be able to do*. San Francisco, CA: Jossey-Bass.

Darling-Hammond, L., Chung, R., & Frelow, F. (2002). Variation in teacher preparation: How well do different pathways prepare teachers to teach? *Journal of Teacher Education, 53*, 286–302.

Darling-Hammond, L., Newton, X., & Wei, R. C. (2012). *Developing and assessing beginning teacher effectiveness: The potential of performance assessments*. Stanford, CA: Stanford Center for Opportunity Policy in Education. http://edpolicy.stanford.edu/sites/default/files/publications/developing-and-assessing-beginning-teacher-effectiveness-potential-performance-assessments.pdf

Darling-Hammond, L., & Sykes, G. (2003). Wanted: A national teacher supply policy for education: The right way to meet the 'highly qualified teacher' challenge. *Educational Policy Analysis Archives, 11*(33). Retrieved from http://epaa.asu.edu/epaa/v11n33/

Denton, J. J. (1982). Early field experience influence on performance in subsequent coursework. *Journal of Teacher Education, 33*, 19–23.

Denton, J. J., & Lacina, L. J. (1984). Quantity of professional education coursework linked with process measures of student teaching. *Teacher Education and Practice*, pp. 39–64.

Denton, J. J., Morris, J. E., & Tooke, D. J. (1982). The influence of academic characteristics of student teachers on the cognitive attainment of learners. *Educational and Psychological Research, 2*, 15–29.

Denton, J. J., & Smith, N. L. (1983). Alternative teacher preparation programs: A cost-effectiveness comparison (Research on Evaluation Program, Paper and Report Series No. 86). Eugene, OR: University of Oregon.

Denton, J. J., & Tooke, D. J. (1981). Examining learner cognitive attainment as a basis for assessing student teachers. *Action in Teacher Education, 3*, 39–45.

Druva, C. A. & Anderson, R. D. (1983). Science teacher characteristics by teacher behavior and by student outcome: A meta-analysis of research. *Journal of Research in Science Teaching, 20*, 467–479.

Ebmeier, H., & Good, T. L. (1979). The effects of instructing teachers about good teaching on the mathematics achievement of fourth grade students. *American Educational Research Journal, 16*, 1–16.

Feiman-Nemser, S. & Buchmann, M. (1985). Pitfalls of experience in teacher preparation. *Teachers College Record, 87*, 53–65.

Ferguson, P., & Womack, S. T. (1993). The impact of subject matter and education coursework on teaching performance. *Journal of Teacher Education, 44*, 55–63.

Fischetti, J. & Larson, A. (2002). How an integrated unit increased student achievement in a high school PDS. In I. N. Guadarrama, J. Ramsey, & J. L. Nath (Eds.), *Forging alliances in community and thought: Research in professional development schools* (pp. 227–258). Greenwich, CT: Information Age.

Frey, N. (2002). Literacy achievement in an urban middle-level professional development school: A learning community at work. *Reading Improvement, 39*, 3–13.

Gallego, M. A. (2001). Is experience the best teacher? The potential of coupling classroom and community-based field experiences. *Journal of Teacher Education, 52*, 312–325.

Gill, B. & Hove, A. (1999). *The Benedum Collaborative model of teacher education: A preliminary evaluation. Report prepared for the Benedum Center for Education Reform DB-303-EDU*. Santa Monica, CA: Rand Education.

Glaeser, B. C., Karge, B. D., Smith, J., & Weatherill, C. (2002). Paradigm pioneers: A professional development school collaborative for special education teacher education candidates. In I. N. Guadarrama, J. Ramsey, & J. L. Nath (Eds.), *Forging alliances in community and thought: Research in professional development schools* (pp. 125–152). Greenwich, CT: Information Age.

Goldhaber, D., & Anthony, E. (2007, February). Can teacher quality be effectively assessed? *The Review of Economics and Statistics, 89*, 134–150. Retrieved from http://www.mitpressjournals.org/doi/pdf/10.1162/rest.89.1.134

Goodlad, J. I., Soder, R., & Sirotnik, K. A. (1990). *Places where teachers are taught*. San Francisco, CA: Jossey-Bass.

Grossman, P. L., & Stodolsky, S. S. (1995). Content as context: The role of school subjects in secondary school teaching. *Educational Researcher, 24*(8), 5–11, 23.

Guadarrama, I. N., Ramsey, J. & Nath, J. L. (Eds.). (2002). *Forging alliances in community and thought: Research in professional development schools*. Greenwich, CT: Information Age.

Haberman, M., & Post, L. (1992). Does direct experience change education students' perceptions of low-income minority children? *Midwestern Educational Researcher, 5*, 29–31.

Hammerness, K., Darling-Hammond, L., & Shulman, L. (2002, August). Toward expert thinking: How case-writing contributes to the development of theory-based professional knowledge in student-teachers. *Teaching Education, 13*, 221–245.

Hanby, D. (2011, October). Pioneer reflections from Ohio's 2010-2011 journey: Pilot year insights from Leg I and Leg II travelers. Paper presented at the Ohio Council of Teacher Educators Conference, Columbus, OH.

Hayes, H. A., & Wetherill, K. S. (1996, April). A new vision for schools, supervision, and teacher education: The professional development system and Model Clinical Teacher Project. Paper presented at the annual meeting of the American Educational Research Association, New York, NY.

Henry, M. (1983). The effect of increased exploratory field experiences upon the perceptions and performance of student teachers. *Action in Teacher Education, 5*, 66–70.

Houston, W. R., Clay, D. Hollis, L. Y., Ligons, C., Roff, L. & Lopez, N. (1995). *Strength through diversity: Houston Consortium for Professional Development and Technology Centers*. Houston, TX: University of Houston, College of Education.

Howey, K. R., & Zimpher, N. L. (1989). Profiles of preservice teacher education: Inquiry into the nature of programs. Albany: State University of New York Press.

Jett-Simpson, M., Pugach, M. C., & Whipp, J. (1992, April). Portrait of an urban professional development school. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Judge, H., Carriedo, R., & Johnson, S. M. (1995). Professional development schools and MSU. The report of the 1995 review. Available from http://35.8.168.203.kiosk/PDS_Rpt.html

Knowles, J. G., & Hoefler, V. B. (1989). The student-teacher who wouldn't go away: Learning from failure. *Journal of Experiential Education*, *12*(2), 14–21.

Koerner, M., Rust, F., & Baumgartner, F. (2002). Exploring roles in student teaching placements. *Teacher Education Quarterly*, *29*(2), 35–58.

LaBoskey, V. K., & Richert, A. E. (2002). Identifying good student teaching placements: A programmatic perspective. *Teacher Education Quarterly*, *29*(2), 7–34.

Lampert, M., & Ball, D. L. (1998). *Teaching, multimedia, and mathematics: Investigations of real practice*. New York, NY: Teachers College Press.

Lawrenz, F., & McCreath, H. (1988). Integrating quantitative and qualitative evaluation methods to compare two teacher inservice training programs. *Journal of Research in Science Teaching*, *25*, 397–407.

Lustick, D., & Sykes, G. (2006). National Board Certification as professional development: What are teachers learning? *Education Policy Analysis Archives*, *14*(5). Retrieved from http://epaa.asu.edu/epaa/v14n5/

Mantle-Bromley, C. (2002). The status of early theories of professional development school potential. In I. N. Guadarrama, J. Ramsey, & J. L. Nath (Eds.), *Forging alliances in community and thought: Research in professional development schools* (pp. 3–30). Greenwich, CT: Information Age.

Monk, D. H. (1994). Subject area preparation of secondary mathematics and science teachers and student achievement. *Economics of Education Review*, *13*, 125–145.

Monk, D. H., & King, J. A. (1994). Multilevel teacher resource effects in pupil performance in secondary mathematics and science: The case of teacher subject matter preparation. In R.G. Ehrenberg (Ed.), *Choices and consequences: Contemporary policy issues in education* (pp. 29–58). Ithaca, NY: ILR Press.

Neubert, G. A., & Binko, J. B. (1998). Professional development schools: The proof is in the performance. *Educational Leadership*, *55*(5), 44–46.

Newton, S. (2010). *Preservice performance assessment and teacher early career effectiveness: Preliminary findings on the performance assessment for California teachers*. Stanford, CA: Stanford University, Stanford Center for Assessment, Learning, and Equity.

Orland-Barak, L. (2002). The impact of the assessment of practice teaching on beginning teaching: Learning to ask different questions. *Teacher Education Quarterly*, *29*, 99–122.

Patterson, R. S., Michelli, N. M., & Pacheco, A. (1999). *Centers of pedagogy: New structures for educational renewal*. San Francisco, CA: Jossey-Bass.

Pecheone, R., & Chung, R. R. (2006). Evidence in teacher education: The performance assessment for California teachers. *Journal of Teacher Education*, *57*, 22–36.

Pecheone, R., & Stansbury, K. (1996). Connecting teacher assessment and school reform. *Elementary School Journal*, *97*, 163–177.

Renner, N. (2012, June 18). Presentation to the deans and directors of the SUNY Colleges of Education, Albany, New York.

Rodriguez, Y., & Sjostrom, B. (1995). Culturally responsive teacher preparation evident in classroom approaches to cultural diversity: A novice and an experienced teacher. *Journal of Teacher Education*, *46*, 304–311.

Ross, S. M., Hughes, T. M., & Hill, R. E. (1981). Field experiences as meaningful contexts for learning about learning. *Journal of Educational Research*, *75*, 103–107.

Shroyer, G., Wright, E., & Ramey-Gassert, L. (1996). An innovative model for collaborative reform in elementary school science teaching. *Journal of Science Teacher Education*, *7*, 151–168.

Shulman, L. S. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review*, *57*, 1–22.

Shulman, L. S. (1996). Just in case: Reflections on learning from experience. In K. T. J. Colbert & P. Desberg (Eds.), *The case for education: Contemporary approaches for using case methods* (pp. 197–217). Boston, MA: Allyn & Bacon.

Sumara, D. J., & Luce-Kapler, R. (1996). (Un)Becoming a teacher: Negotiating identities while learning to teach. *Canadian Journal of Education*, *21*, 65–83.

Sunal, D. W. (1980). Effect of field experience during elementary methods courses on preservice teacher behavior. *Journal of Research in Science Teaching*, *17*, 17–23.

Tatto, M. T. (1996). Examining values and beliefs about teaching diverse students: Understanding the challenges for teacher education. *Educational Evaluation and Policy Analysis*, *18*, 155–180.

Trachtman, R. (1996). *The NCATE professional development school study: A survey of 28 PDS sites*. Washington, DC: National Council for Accreditation of Teacher Education.

Vandevoort, L. G., Amrein-Beardsley, A., & Berliner, D. C. (2004). National Board certified teachers and their students' achievement. *Education Policy Analysis Archives*, *12*, 117.

Wideen, M., Mayer-Smith, J., & Moon, B. (1998). A critical analysis of the research on learning to teach: Making the case for an ecological perspective on Inquiry. *Review of Educational Research*, *68*, 130–178.

Wilson, M., Hallam, P. J., Moss, P., & Pecheone, R. (2014). Evaluating the validity of portfolio assessments for licensure decisions. *Education Policy Analysis Archives*, *22*. Retrieved from http://dx.doi.org/10.14507/epaa.v22n6.2014

Wiseman, D. L., & Cooner, D. (1996). Discovering the power of collaboration: The impact of a school-university partnership on teaching. *Teacher Education and Practice*, *12*, 18–28.

Wittenbrink, S. (2013). Rigor and results: How edTPA accelerated my preparation as a pre-service teacher. *Tomorrow's Teachers*, p. *29*.

Zeichner, K. M. (1992). Conceptions of reflective teaching in contemporary U.S. teacher education programs. In L. Valli (Ed.), *Reflective teacher education: Cases and critiques* (pp. 161–173). Albany: State University of New York Press.

Zeichner, K. M. (1996). Educating teachers for cultural diversity. In K. Zeichner, S. Melnick, & M. L. Gomez (Eds.), *Currents of reform in pre-service teacher education* (pp. 133–175). New York, NY: Teachers College Press.

Zeichner, K. M., & Gore, J. (1990). Teacher socialization. In W. R. Houston, M. Haberman, J. P. Sikula, & Association of Teacher Educators (Eds.), *Handbook of research on teacher education* (pp. 329–348). New York, NY: Macmillan.

PEABODY JOURNAL OF EDUCATION, 89: 562–565, 2014
Copyright © Taylor & Francis Group, LLC
ISSN: 0161-956X print / 1532-7930 online
DOI: 10.1080/0161956X.2014.939010

Routledge
Taylor & Francis Group

Afterword

Sharon Porter Robinson
American Association of Colleges for Teacher Education (AACTE)

This issue of the *Peabody Journal of Education*, "Clinical Partnerships in Teacher Education: Perspectives, Practices and Outcomes," addresses the timely and critical topic of clinical partnerships as a transformative component in preparing teachers for today's and tomorrow's classrooms. The issue and authors of the eight articles highlight insights from leaders in the field; provide examples from exemplary programs with rich histories in partnership endeavors; describe opportunities, challenges, and implications; and illuminate policy perspectives and outcomes that illustrate hoped-for possibilities for student learning (American Association of Colleges for Teacher Education [AACTE], 2010; Cibulka, 2011; Howey, 2011; National Council for the Accreditation of Teacher Preparation, 2010). Audiences of teacher educators who are university, district, and private education preparation program providers; state, district, and school administrators; classroom teachers; teachers unions; policymakers; and citizen advocate constituents interested in quality teaching will find this theme issue useful as they consider their roles and contributions in educating future teachers, supporting the development of high-quality teachers to practice in every K-12 classroom, and transforming the profession at a time of urgent and critical need.

In this Afterword, and as the President and Chief Executive Officer of AACTE, I highlight the association's policy brief, "The Clinical Preparation of Teachers: A Policy Brief," which was released at the National Press Club on March 11, 2010, as "Teacher Preparation: Who Needs It? The Clinical Component" (AACTE, 2010). As the quality of teaching is now recognized as the most important school-based factor in student learning, teacher preparation is rightfully receiving national attention. The policy brief's questions of keen interest are *What is the best way to prepare highly effective teachers?* and *What are the key features of such programs?* The extensive and respected body of research is cited in the policy brief and supports the claim that teacher preparation is most beneficial when it is directly linked to practice—the key construct in this special theme issue.

Three critical features of such preparation are (a) tight integration among courses and between course work and clinical work in schools; (b) extensive and intensively supervised clinical work integrated with course work; and (c) close, proactive relationships with schools that serve diverse learners effectively and develop and model good teaching (Darling-Hammond, 2006). Furthermore, AACTE's policy brief emphasizes the importance of clinical aspects of teacher education that include the typical processes of clinical work (observing, assessing, diagnosing,

---

Correspondence should be sent to Sharon Porter Robinson, 1307 New York Ave NW, Suite 300, Washington, DC 20005. E-mail: SRobinson@aacte.org

prescribing, and adjusting practice to reflect new knowledge), the location (in direct contact with clients), and the duration of the training (including an extended period of practice focused on the developmental nature of learning to teach such as rigorous and sustained student teaching, an internship and/or residency). The authors in this theme issue provide rich narratives that include perspectives, practices, and outcomes imbedded in the intensive work of clinical partnerships in the clinical preparation of teachers.

Teachers for a New Era, a large-scale, multiyear grant program of the Carnegie Corporation of New York, launched in 2001, supported innovation in teacher education programs at selected colleges and universities. The report of this work was based on the premise that excellent teaching is a clinical skill and that exemplary teacher education provides for clinical education in an authentic setting (Carnegie Corporation of New York, 2001). One of the report's three essential principles was that

> education should be understood as an academically taught 'clinical practice profession,' similar to clinical psychology and medicine, requiring close cooperation between colleges of education and actual practicing schools; master teaches as clinical faculty in the college of education; and residencies for beginning teachers during a two-year period of induction. (p. 4)

Preservice teacher candidates, university faculty, practicing classroom teachers, district and school administrators, and students are shown throughout the journal's present theme issue as inextricably linked in a 21st-century model of what high-quality programs in teacher preparation look like. There are examples of close cooperation between colleges of education and schools, master teachers as university and clinical faculty, master teachers in P-12 classrooms, varied roles and commitments to the partnership models, opportunities and costs, and field and clinical experiences for teacher candidates that differ from the traditional notions of these in the past.

AACTE's (2010) "Clinical Preparation of Teachers: A Policy Brief" highlights the importance of the clinical preparation of teachers as a key factor in students' success as it will have an impact on tomorrow's graduates and their—and the nation's—ability to compete in the challenging global economy and participate in pluralistic democratic society. The narratives and themes provided by the array of authors and university-based teacher preparation programs in this issue of the *Peabody Journal* illustrate the themes of clinical practice articulated in the Policy Brief. The themes include knowing one's subject matter is necessary, but not sufficient, for effective teaching; experts recognize that excellent teaching is complex, intricate work that can be learned to high levels of skill with appropriate training; much of the information teachers need to make effective decisions emerges in the context of practice; and good clinical experience yields positive effects that include increased student achievement, teacher retention, and teachers' sense and efficacy in preparedness.

As the authors in this *Peabody Journal of Education*'s issue confirm, clinical partnerships to support teaching as a clinical practice profession are essential to transforming teacher preparation. The attributes of teaching—seen as a clinical practice profession—are clearly parallel to those of other professionals in this model (Alter & Coggshall, 2009). These include

- The centrality of clients (students), involving direct observation and treatment;
- Requisite specialized knowledge and skills plus theoretical, practical, and technical understandings not possessed by laypeople;
- The use of evidence and judgment to determine the best course of treatment;

- A professional community and standards of practice to which professionals and professional organizations, including preparation institutions, are held accountable; and
- Clinical education, including rigorous academic and practical training involving working effectively with clients, obtaining a high degree of knowledge, understanding how to use evidence and judgment in practice and comprehending and valuing the standards of their respective professional communities.

This issue's inclusion of teacher preparation programs across the nation and authors' descriptions of their efforts to address the critical components of clinical preparation of teachers in clinical partnership sites is exciting and encouraging. It is clear from a body of research supported by these authors that high-quality preparation programs are *school embedded*—that is, grounded in the work of schools—through closely linked partnerships between the preparation program and the school (Darling-Hammond, 2006). The authors in this issue describe how clinical partners bridge theoretical concepts and pedagogical knowledge, simultaneously taught in an academic format, to the actual doing, or enactment, of teaching in real time with real students in live classrooms. Key components of the theme issue's programs across the collective of authors focus on strong school–university partnerships supported by a multitude of constituency groups; high-quality and diverse settings or placement schools; clinical placements and how these are determined and selected; clinical teachers who are selected for their deep expertise, experience, and match; coordinating faculty who are specially designated and supported to work closely with K-12 schools; the school-based clinical curriculum, which is jointly designed and links theory to practice in a developmental model of teacher preparation; the length of the program to ensure that structures support school-embedded clinical work; and performance assessment that includes ongoing evaluation and assessment of teacher candidates' performance as they interact with, instruct, guide, correct, and support students in authentic settings and real time.

There are, of course, numerous and exemplary teacher preparation programs based on clinical models and clinical partnerships the profiles of which emerge as potential models for the field. This issue captures and showcases eight such models. They are based on high-quality research, are innovative and inspiring, and hold great promise for success. AACTE's (2010) "The Clinical Preparation of Teachers: A Policy Brief" additionally provides an overview of state requirements and regulatory policies, recommendations for states, federal requirements and clinical preparation, federal recommendations, and recommendations for providers of teacher preparation. Although high-quality clinical practice and clinical partnerships are not yet the norm in today's preparation programs, this is the direction in which the field is moving. AACTE contends that such partnerships are an essential component of modern educator preparation. Leadership and support from university and community leaders are essential to making it happen. AACTE members stand ready to join with neighboring school districts, our essential partners, in developing educators needed in today's diverse classrooms in a global world. Finally, AACTE members are sending a message to federal and state policymakers: All providers of educator development must be required to meet the same professional standards of program efficacy and accountability. Extensive clinical development is a program standard that must be met, and policymakers should require all providers to report on the impact and effectiveness of their programs, including the most profound effect on the learning of P-12 students. Clinical partnerships in clinical teacher preparation are one essential avenue to making this transformational vision a reality.

AUTHOR BIO

Sharon Porter Robinson, Ed.D., is President and CEO of the American Association of Colleges for Teacher Education (AACTE). She has served, or currently serves, on the Board of Trustees of the Woodrow Wilson National Fellowship Program, Southern Education Foundation, National Education Association Foundation for the Improvement of Education, the Management and Training Corp., and as a director for Jobs for America's Graduates.

REFERENCES

Alter, J., & Coggshall, J. G. (2009, March). *Teaching as a clinical practice profession: Implications for teacher preparation and state policy*. New York: The New York Comprehensive Center and the National Comprehensive Center on Teacher Quality.

American Association of Colleges for Teacher Education. (2010, March 11). *The clinical preparation of teachers: A policy brief. Teacher preparation: Who needs it? The clinical component*. Washington, DC: National Press Club.

Carnegie Corporation of New York. (2001). *Teachers for a new era: A national initiative to improve the quality of teaching—Announcement and prospectus*. New York, NY: Author.

Cibulka, J. G. (2011). The new normal: Challenges and opportunities for the transformation of educator preparation. *Quality Teaching, 21*, 1–10.

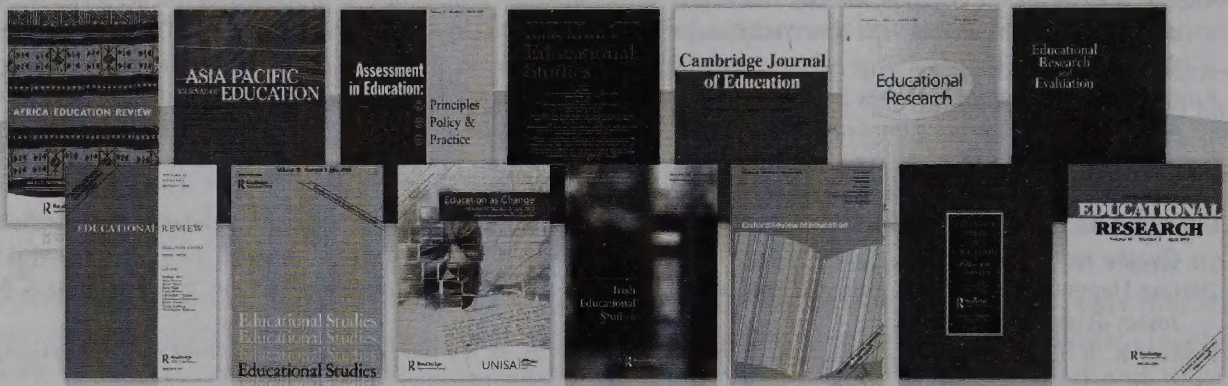
Darling-Hammond, L. (2006). *Powerful teacher education: Lessons from exemplary programs*. San Francisco, CA: Jossey-Bass.

Howey, K. R. (2011). *NCATE state alliances for teacher preparation: A framework for setting priorities and building partnership prototypes*. Albany, NY: SUNY, Nelson A. Rockefeller Institute of Government.

National Council for the Accreditation of Teacher Education. (2010). *Transforming teacher education through clinical practice: A national strategy to prepare effective teachers*. Report of the Blue Ribbon Panel on Clinical Preparation and Partnerships for Improved Student Learning. Washington, DC: Author. Retrieved from http://www.ncate.org

Routledge
Taylor & Francis Group

Educational Research
Journals from Routledge



Africa Education Review
Co-published with UNISA Press
www.tandfonline.com/raer

Asia Pacific Journal of Education
Published on behalf of The National Institute of Education, Singapore
Included in the Social Sciences Citation Index®
www.tandfonline.com/apje

Assessment in Education: Principles, Policy & Practice
www.tandfonline.com/aie

British Journal of Educational Studies
Published on behalf of the Society for Educational Studies
Included in the Social Sciences Citation Index®
www.tandfonline.com/rbje

Cambridge Journal of Education
www.tandfonline.com/cje

Educational Research
The journal of the National Foundation for Educational Research (NFER)
Included in the Social Sciences Citation Index®
www.tandfonline.com/edresearch

Educational Research and Evaluation
An International Journal on Theory and Practice
Now incorporating Evaluation and Research in Education
www.tandfonline.com/ere

Educational Review
Included in the Social Sciences Citation Index®
www.tandfonline.com/edreview

Educational Studies
Included in the Social Sciences Citation Index®
www.tandfonline.com/edstudies

Education as Change
Co-published with UNISA Press
Included in the Social Sciences Citation Index®
www.tandfonline.com/redc

Irish Educational Studies
Official Journal of the Educational Studies Association of Ireland (ESAI)
Included in the Social Sciences Citation Index®
www.tandfonline.com/ies

Oxford Review of Education
Included in the Social Sciences Citation Index®
www.tandfonline.com/ore

Research Papers in Education
Included in the Social Sciences Citation Index®
www.tandfonline.com/rpe

Scandinavian Journal of Educational Research
Included in the Social Sciences Citation Index®
www.tandfonline.com/sjer

www.educationarena.com

Peabody Journal of Education

Issues of Leadership, Policy, and Organizations

Volume 89, Number 4, 2014

Clinical Partnerships in Teacher Education: Perspectives, Practices, and Outcomes

Introduction to Clinical Partnerships in Teacher Education: Perspectives, Practices, and Outcomes 415
Ann E. Larson and Diane W. Kyle

Foreword: Systemic Strategies to Create Clinically Rich Teacher Preparation 419
James G. Cibulka

Clinical Teacher Preparation: A Retrospective 423
Betty Lou Whitford and Susan Kidd Villaume

The Challenges Never Stop! Two Decades of Reaching for the Best in Clinical Practice 436
Bruce E. Field and Irma J. Van Scoy

Schools as Clinics: Learning About Practice in Practice 453
Robin Hands and Yuhang Rong

Clinical Preparation of Teachers in the Context of a University-Wide Community Engagement Emphasis 466
Melissa Evans-Andris, Diane W. Kyle, Ann E. Larson, Harrie Buecker, W. Blake Haselton, Penny Howell, Caroline Sheffield, Christine Sherretz, and Ingrid Weiland

Exploring the Influences of a Partner-Based Teacher Credential Program on Candidates' Performance Outcomes 482
Elizabeth A. van Es, Judith Haymore Sandholtz, and Lauren M. Shea

Practice Makes Practice: Learning to Teach in Teacher Education 500
Morva McDonald, Elham Kazemi, Megan Kelley-Petersen, Karen Mikolasy, Jessica Thompson, Sheila W. Valencia, and Mark Windschitl

The CAEP Standards and Research on Educator Preparation Programs: Linking Clinical Partnerships With Program Impact 516
Tina Heafner, Ellen McIntyre, and Melba Spooner

Clinical Partnership at a Distance: A Design That Transforms Teaching and Leadership 533
Alyson Adams and Dorene D. Ross

Strengthening Clinical Preparation: The Holy Grail of Teacher Education 547
Linda Darling-Hammond

Afterword 562
Sharon Porter Robinson

0161956X(2014)89(4)